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VACCINE TREATMENT

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My intention is to discuss briefly certain more or less recent developments in connection with vaccine treatment. For this purpose it is not now necessary to review in detail the various stages in the growth of knowledge on which the principles and practice of vaccination preventive as well as curative are based. The aim in either case has been to strengthen and to hasten the natural processes that result in protection against infection and in cure of infection.

Curative vaccine treatment which I shall discuss is a direct outgrowth of the increasingly successful prevention of various infectious diseases by means of artificial immunization, and may be said to represent a culmination of the efforts to combat infection with its own weapons, as it rests primarily on the assumption that under certain conditions the production of specific antibodies by the infected organism can be increased with curative results on injection of special preparations of the virus or the bacteria which caused the infection.

This conception is in full harmony with the accepted interpretation of the preventive action of many bacterial and other vaccines or antigens as due to the easily demonstrable formation of new and specific antibodies, which persist for a longer or shorter time, and to the greater readiness, which also is demonstrable in various ways, with which such formation is renewed when the antigen again enters the vaccinated body, as may occur in the form of the living germs. Except as tested in Pasteur's experiments on inoculation against rabies after the infection has been received, this explanation of the supposedly curative action of vaccines has not been put to the direct test in animal experiments, largely, it seems, because the animal infections with which we are acquainted are not regarded as suitable for that purpose since they do not appear to duplicate sufficiently the human conditions. Whether or not the practical results of vaccine treatment for curative purposes support the hypothesis as to the mode of action on which it is based is even now a debatable question. The conditions under which vaccine treatment is practiced have been allowed to change so much since its formal introduction by Wright in 1902, and have acquired in large degree such character, that there are no secure foundations for comprehensive interpretation and final judgment as to the practical value and significance of the results. A hurried review of events may serve to make this point clearer.

In the early days after Wright's discovery of the opsonins and his advocacy of specific vaccine treatment under the guidance of the opsonic index much attention was given to this index as a measure of specific resistance and in less degree as a means of diagnosis. Soon doubts arose as to the value of the index, the accuracy of the method was questioned, and emphasis was put on the limitations of the results as not being a measure of the final degree of immunity because applicable to one factor only, leaving unmeasured other factors equally important and not necessarily subject to parallel fluctuations of activity. The outcome was the abandonment of the index as an essential element in vaccine treatment, which in the meantime rapidly passed into general use and, at least in this country, soon became the object of an unrestrained and indiscriminate exploitation, to which the medical profession has offered but little resistance. In a short time various practices were introduced, which are not in harmony either with the conditions demanded by the primary hypothesis or with the teachings of bacteriology and immunology, and which before long reduced vaccine treatment as generally practiced from a carefully controlled, essentially scientific procedure to one of guesswork and routine.

The first departure from the course of safety and conservatism was the uncontrolled delegation of the making of vaccines to commercial concerns. According to the fundamental principles, every consideration but that of expediency demands that therapeutic vaccines shall be composed of bacteria as little different and as little removed as possible from the strains causing the infections against which the vaccines are to be used. It is evident that in preparing vaccines on a large scale this condition cannot be met because the changes in virulence and affinities which take place in bacteria under artificial cultivation cannot be avoided. Indeed, there is always danger that with time the specific element on which the desired antigenic effect depends may be lost altogether. There is the further difficulty that the antibodies evoked by one strain may not act on other strains of the same species. That this is not placing undue importance on some remote possibility of no real practical significance is shown conclusively by the regular occurrence of fixed varieties according to antigenetic properties in certain species of pathogenic bacteria as illustrated so well by the pneumococcus. So far as we now know, there are no all-inclusive strains of bacteria causing human infections which might be used to overcome this narrow specificness of immunizing action. In recognition of this drawback to wholesale vaccine making, the polyvalent vaccine was evolved and made to contain so many strains from different sources that every possibility would seem to have been covered But after all this is an unsatisfactory substitute for the fresh autogenous vaccine, which, it would seem, offers the best hope that the indications of each case at all times will be met in the most direct way The principle of using autogenous vaccine as the rule has the further great advantage that to secure it the definite etiology of the infection must be established — a true etiologic diagnosis must be made and there is an end to guesswork Undoubtedly the good results obtained by careful scientific physicians who use autogenous vaccines are due in no small degree to the careful study of the patient whereby is disclosed not only the nature of the outstanding infection but in many cases also hidden bacterial foci that often perhaps are the primary source of the evident localizations, and hence require removal before permanent cure can be established

It was the inability of most physicians to make or have made the bacteriologic studies necessary to obtain the etiologic diagnosis coupled with demand for vaccine treatment that paved the way for the commercial vaccine and also for the second, but less excusable and more harmful, departure from the proper course, namely, the acceptance by physicians of the short cut to vaccine treatment without careful diagnosis offered by the ready made mixed vaccines and by semisecret, unstandardizable mixtures of bacterial products—phylacogens Carried to its logical conclusion, the reasoning that led to these makeshifts would justify the same treatment of all infections, the only diagnosis required being infection As to semisecret cultural filtrates, no reason can be found to warrant their use as vaccines their antigenic values, if they have any, have not been determined, they are not uniform in composition and cannot be standardized, they are more or less toxic, the toxicity being affected by small but uncontrollable differences in the conditions under which bacterial growth takes place At the same time as commercial mixed vaccines contain no autogenous elements, there is the further evident objection that there exists no such constancy of bacterial association in mixed infections as would permit the use of ready made mixtures under the principles of specific vaccine treatment By accepting the mixed vaccines of commerce, the physician abandons reason and begins to grope in the dark, forgetting that "a multitude of remedies is the child of ignorance" His examination of patients tends to become more and more superficial, his diagnosis slipshod, and his treatment routine, without positive indications, and without individualization If more than one vaccine needs to be given, why not follow the simple and perfectly rational plan of mixing them at the time of injection or of injecting them separately?

As vaccine treatment became readily available by means of stock and mixed vaccines of all kinds, its use was extended to practically all forms of infection, acute and chronic, general and local, and even to conditions clearly not infectious in nature, regardless of whether or not there was any good reason to believe that benefit would come from efforts to stimulate the output of specific antibodies under all these circumstances As we look back it seems now as if special efforts were made "to hasten the use of the remedy while it still cured" As would be expected, the interpretation of the results often has lacked the discrimination and questioning which accompany the efforts of critical intelligence The great difficulties in the way of reaching sound conclusions as to the real value of a special therapeutic method — at best with an indirect and auxiliary action—in a great variety of infections that are subject to spontaneous improvements, and most of which as a rule are spontaneously curable, did not in all cases lead to proper caution in judging the apparent results of the routine and indiscriminate use of vaccines in this large field The observations have not been always trustworthy or the reasoning just The simple fact is that we have no reliable evidence to show that vaccines, as used commonly, have the uniformly prompt and specific curative effects proclaimed by optimistic enthusiasts and especially by certain vaccine makers, who manifestly have not been safe guides to the principles of successful and rational therapeutics

While uncertainty and disappointment have developed in regard to the usefulness of vaccines, this must be ascribed more to fault of exploitation than to fault of the thing exploited, for in the original field, restricted to subacute and chronic local infections under mechanical conditions that are favorable for healing, cautious observers, proceeding as nearly as possible in accord with the principles of immunity, have reached the conclusion that specific vaccine treatment may be of great auxiliary value in stimulating the defensive resources of the organism

That the beneficial action of specific vaccines in hastening recovery in subacute and chronic localized infections may result from increase of specific antibodies, as assumed, looks like a reasonable explanation, as the infecting germs may be so enclosed and walled off that antigenic substances in adequate quantities do not reach the centers of antibody production It is of course altogether possible that other factors also are concerned in the effects of vaccines, as, for example, stimulation of the leukocytic activity, which is subject to variation, liberation of nonspecific ferments, and protein fever, but until recently only scant attention was given to such possibilities According to this view of the nature of the action of vaccines, acute infectious diseases were regarded as not suitable for vaccine treatment because here the infecting germs, widely distributed in the body, would furnish all the stimulus needed to call forth an abundant supply of antibodies The original theory of vaccine treatment really furnishes no basis for the application of vaccines to acute infectious diseases and when, nevertheless, reports were made of striking effects from vaccines in acute disease, especially in typhoid fever and in pneumonia, we had no preconceived or readily available explanation to offer of the unexpected results This brings us to the consideration of the remarkable development during the last year or two of vaccine treatment of typhoid fever

While isolated instances of rapid improvement and even crisis ending in recovery are and have been ascribed to the injection of specific vaccines and also of semisecret culture filtrates in various acute infectious diseases, the true significance of such results in many cases remains doubtful on account of the variable spontaneous course of such diseases But in the case of typhoid fever at least, as I hope to make clear, the situation is different

Vaccine treatment of typhoid fever was practiced first so long ago as 1893 by Eugene Fraenkel, who gave subcutaneous injections of heated thymus broth cultures of typhoid bacilli apparently with benefit It had been found that this vaccine would protect animals against living typhoid bacilli, and Fraenkel wanted to determine whether or not it would modify the clinical picture of typhoid fever when injected during the attack The method received but little attention and save for interesting experiments of Petruschky and of Richardson it was not until about 1909 that reports began to appear of more or less favorable results from the subcutaneous injections of typhoid vaccines of various kinds The results were not striking and yet not without encouragement, as the intensity of the symptoms and the duration of the attack seemed to be reduced In a few cases rather quick cures followed as had been noted by Fraenkel also Then came the intravenous injection of the vaccine by Ichikawa (1912) and others with such noteworthy effects as to attract general attention and secure for the method prompt trial at many hands

At present it seems to be the opinion of almost all who have used the intravenous method of injection that by it the course may be modified and shortened and in a considerable number of cases even cure by crisis produced As it is very rarely that typhoid ends by spontaneous crisis — according to good authority in about 0 1 per cent of the cases — the occurrence of recovery by crisis in from 30 to 40 per cent after intravenous injection certainly cannot be ascribed to any chance spontaneous cure The striking immediate results of an effective injection are now well known Within half an hour or so a chill, often severe occurs with a rapid rise of the temperature, followed after some hours by a progressive fall, relaxation profuse perspiration, and rapid subjective and general improvement first the number of leukocytes falls, and then there is a rapid rise to 15,000 or more The subsequent course may be a permanent return to normal temperature and prompt recovery — crisis, a rise of temperature to the previous level and then a gradual fall to normal in a few days — lysis, or the attack may be resumed, running an apparently unmodified or somewhat milder course than before the injection When the attack is resumed, reinjection after a few days may cut it short, but it appears that if from two to three injections from three to four days apart have only temporary effect, no abortive cure need be expected

Crisis has been produced in typhoid fever by the injection not only of typhoid vaccines of various kinds, but also of colon vaccine, of mouse typhoid vaccine of meningococcus vaccine, and even of albumose Indeed, the specific nature of Fraenkel's results in 1893 was challenged promptly by Rumpf, who claimed the same results from the injection of products of pyocyaneus bacilli In other infections than typhoid, nonspecific products intravenously may cause acute critical reactions, as typhoid vaccines in paratyphoid fever colon vaccines in puerperal sepsis, pneumococcus and typhoid vaccines in erysipelas,[1] and typhoid vaccines in pneumonia[1] In normal persons the intravenous injection of typhoid vaccine may give a reaction much like that in typhoid fever, but a larger dose may be required I may mention, too, that in pneumonia intravenous injection of autolyzed pneumococci, prepared by Rosenow's method, may cause an immediate chill with rise and fall of temperature and fall and rise of leukocytes, in short, the same phenomenon as seen in the induced crisis in typhoid and followed in some cases by prompt recovery[1] The intravenous injection of protein substances appears to produce a reaction which closely resembles the chills and fever that occur naturally in the course of various infections We are reminded of reactions observed by Vaughan in his experimental study of protein fever and also of effects said to follow intravenous injections of nonprotein colloids for instance, gold

Whether or not the production of this kind of reaction is associated frequently with improvement and prompt recovery in other diseases than typhoid is not known Typhoid fever is the only disease which has been treated systematically by the new method and as yet specific vaccines have been used almost entirely In their admirable and thorough study of a series of fifty-three cases of typhoid, treated with Gay's vaccine Gay and Chickering[2] found that no permanent benefit resulted in 34 per cent, lysis with shortened course in 24 5 per cent, and critical cure in 41 5 per cent They report no alarming symptoms from the injections but others using different methods have reported instances of collapse, of hemorrhage and of hyperpyrexia with delirium and death, so that this treatment is not to be lightly undertaken

Gay would ascribe the rapid cure to the combined action of specific antibodies and the leukocytosis This view is supported by the facts observed by several that the most pronounced results have been obtained after the tenth day of the disease when the general reaction against the infection is fully developed, and that much less effect has been achieved in the incubation period As the same results may be produced in typhoid fever by nonspecific vaccines and even by albumose as by various forms of typhoid vaccines, although whether in the same percentages is not known, it is natural that other views should be presented Jobling and Petersen[3] find that in animals the intravenous injection of killed bacteria mobilizes nonspecific ferments, and they suggest that the effects of specific vaccines and other products in typhoid fever are due to the work of these ferments in destroying bacilli and in reducing toxic substances to nontoxic It has been suggested also that following the shock of the intravenous injection the organism passes into a refractory condition (antianaphylaxis) in which it ceases to react to the typhoid bacillus and its products These views, it seems to me, may serve as suggestions for more formal hypotheses to direct investigations for the purpose of learning more of the nature and the effects of the reaction as well as its therapeutic value

SUMMARY

If the presentations in this paper are trustworthy, it may be concluded that the general results so far from the routine use of commercial vaccines, polyvalent and mixed, have no value as evidence for or against the curative usefulness of vaccine treatment, and hence no value, either, with respect to the soundness of the theory on which vaccine treatment primarily has been developed

In subacute and chronic localized infections, the results appear to indicate that specific vaccines properly and skillfully used have value, quite likely because they increase the production of specific antibodies, as demanded by the theory, but probably also because they stimulate leukocytic and other activities

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[1] Unpublished observations by George Mathers and C W Wells

[2] Gay F P and Chickering H T Treatment of Typhoid Fever by Intravenous Injections of Polyvalent Sensitized Typhoid Vaccine Sediment, Arch Int Med February 1916 p 303

[3] Jobling J W and Petersen William Bacteriotherapy in Typhoid Fever THE JOURNAL A M A Aug 7 1915 p 515

In typhoid fever and possibly also in other infectious diseases, the intravenous injection of specific vaccines and also of other substances may induce crisis and prompt recovery The mechanism of this action is not fully understood, but as it involves something more than or different from specific stimulation of the production of antibodies, it cannot be interpreted in terms of the current conception of the action of vaccines We are entering, therefore, a new and interesting development in the study and treatment of infectious diseases

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THE DETERMINATION OF ALVEOLAR CARBON DIOXID TENSION BY A SIMPLE METHOD *

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In acidosis the tension, that is to say, the effective concentration of carbon dioxid in the alveolar air, is diminished [1] By the determination of this tension the diagnosis of acidosis may be made, the degree of severity estimated, and the results of treatment followed The determination may be carried out in a few minutes' time and with no especial discomfort to the patient Two procedures are involved the collection of the alveolar air, and the analysis of the sample

COLLECTION OF ALVEOLAR AIR

The method of collection is essentially that of Plesch,[2] as modified by Higgins [3] A rubber bag of approximately 1,500 c c capacity[4] is connected by means of a short rubber tube to a glass mouthpiece [5] About 600 c c of air are blown into the bag with an atomizer bulb, and the rubber tube clamped off by a pinchcock The subject should be at rest and breathing naturally [6] At the end of a normal expiration, the subject takes the tube in his mouth, the pinchcock is released and the subject's nose closed by the observer The subject breathes back and forth from the bag four times in twenty seconds, emptying the bag at each inspiration The observer should indicate when to breathe in and out Breathing more frequently will not greatly alter the results At the end of twenty seconds, the tube is clamped off and the air analyzed The analysis should be carried out within three minutes' time, as carbon dioxid rapidly escapes through rubber

The foregoing procedure applies to patients who are capable of cooperating to some extent In the case of comatose patients, the initial amount of air in the rubber bag must be greater (1,000 c c at least), and the period of rebreathing prolonged to 30 seconds [7] This is necessary, as it is not feasible that the bag be completely emptied of air at each inspiration, and therefore a longer time is required for the carbon dioxid tension in the bag and in the lungs to become equal The initial amount of air in the bag should be such that it is at least one half and preferably as much as two thirds emptied at each inspiration Since comatose patients cannot hold the mouthpiece, some form of mask is necessary This may be a gas anesthetic mask[8] or such a device as described below for use with infants

A special mask has been devised for the collection of alveolar air from infants [9] It is made from the nipple of a wide mouth (Hygeia) nursing bottle and a piece of thin rubber tissue (dental dam) A sheet of the tissue (8 by 10 inches) is perforated in the center by a piece of hot metal or glass tubing of large bore The hole is stretched and pulled over the nipple and slipped down to the lower rim A small amount of rubber cement is applied to hold the tissue and nipple together A strip of adhesive plaster three-eighths inch wide is applied around the rim of the nipple so as to overlap the rubber tissue and hold it firmly in place The extreme tip of the nipple is cut off and a short glass tube, three eighths inch in diameter, inserted

> ‘In making a collection of alveolar air from infants a rubber bag of 500 c c capacity is connected with the mask and partially filled with air by means of an aspirator bulb The neck of the bag is closed off by a pinchcock or with the fingers, the mask placed over the nose and mouth of the infant and the rubber tissue closely drawn around the face so as to prevent the escape of air The mask should, if possible, be placed over the face just at the end of expiration Respirations are allowed to continue for from twenty-eight to thirty-two seconds, and at the end of an expiration the neck of the bag is closed off and the mask removed from the face. We have found that it is necessary that the infant should be breathing quietly for one minute previous to the collection of the air sample, as vigorous crying, just before the mask is put on, leads to a lowering of the carbon dioxid tension, as determined, by several millimeters Crying during the collection of the sample almost invariably occurs and facilitates mixing of the gases The effect is to raise the tension somewhat if crying is very vigorous, but not to such an extent as to be significant The initial amount of air in the bag must be such that during inspiration the bag is from one-half to two thirds empty, but never completely collapsed The amount of air required for infants under 1 year of age varies from 250 c c to 400 c c”

The mask described above for use with infants may be very conveniently used for the collection of alveolar air samples from dogs The animal's nose is inserted into the mask and the rubber tissue drawn closely around the muzzle The time of a collection need not exceed twenty-five seconds

For analysis of the air samples, the apparatus required comprises eight test tubes, containing standard phosphate solutions, a standard bicarbonate solution, a small test tube, a glass tube or pipet drawn out to a capillary point, and a box for color comparison

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* From the Harriet Lane Home and the Department of Pediatrics, the Johns Hopkins University

[1] For discussions of the significance of alveolar carbon dioxid tension, see Porges, Leimdorfer and Markovici Ztschr f klin Med 1911, [illegible] 389 Higgins and Means Jour Pharmacol and Exper Therap, [illegible] 1 Peabody Am Jour Med Sc, 1916, cli, 184 Howland [illegible]ott Bull Johns Hopkins Hosp, 1916, xxvii, 63

[illegible] Ztschr f exper Path u Therap 1909, vi, 380

[illegible] Pub 203 Carnegie Institute of Washington, 1915, p 168

[illegible] and Peabody F W A Comparison of Methods of [illegible] Int Med, March 1914, p 497

[illegible] a hot water bag answers very well If [illegible] be closed by a rubber stopper carrying [illegible] inch in internal diameter [illegible] tubing with rounded edges, 1½ inch [illegible] external diameter

[illegible]inst is a deep, voluntary inspiration [illegible] this causes too low a determination

[7] The bag is clamped off at the end of that expiration occurring nearest to thirty seconds, as no great error is introduced by prolonging the time of rebreathing by two or three seconds

[8] Some advantage may be gained by inserting a large three way stopcock of metal or glass between the mask and the bag When such a stopcock is used, the mask is first put in place on the patient's face with the cock so turned that he breathes the outside air for a few respirations At the end of an expiration the cock is quickly turned so as to bring the bag and the mask into connection

[9] Howland and Mariott Am Jour Dis Child May, 1916

PRINCIPLE OF THE METHOD OF ANALYSIS

The method depends on the fact that if a current of air containing carbon dioxid is passed through a solution of sodium carbonate or bicarbonate until the solution is saturated, the final solution will contain sodium bicarbonate and dissolved carbon dioxid The reaction of such a solution will depend on the relative amounts of the alkaline bicarbonate and the acid carbon dioxid present This, in turn, will depend on the tension of carbon dioxid in the air with which the mixture has been saturated and *will be independent of the volume of air blown through provided saturation has once been attained* High tensions of carbon dioxid change the reaction of the solution toward the acid side Low tensions have the reverse effect, hence the reaction of such a solution is a measure of the tension of carbon dioxid in the air with which it has been saturated

The reaction of such a solution may be determined by adding to it an indicator such as phenolsulphonephthalein[10] which shows over a considerable range of reaction definite color changes A certain color indicates a certain reaction

Solutions of a given reaction may be prepared by mixing acid and alkaline phosphates in definite proportions Such solutions may be kept unaltered for long periods of time and can be used as standards for comparison

PREPARATION OF STANDARD PHOSPHATE SOLUTIONS[11]

Fifteenth molecular acid potassium phosphate Of the pure, recrystallized salt (KH_2PO_4), 9 078 gm are dissolved in distilled water, 200 c c of 0 01 per cent phenolsulphonephthalein solution are added, and the whole is made up to 1 liter

Fifteenth molecular alkaline sodium phosphate The pure, recrystallized salt (Na_2HPO_4 $12H_2O$) is exposed to the air for from ten days to two weeks, protected from dust Ten molecules of water of crystallization are given off and a salt of the formula Na_2HPO_4 $2H_2O$ is obtained Of this salt, 11 876 gm are dissolved in water, 200 c c of 0 01 per cent phenolsulphonephthalein solution are added, and the whole is made up to 1 liter The solutions are mixed in the proportions indicated in the tabulation

PROPORTIONS IN WHICH SOLUTIONS ARE MIXED

Mm	10	15	20	25	30	35	40	45
Acid potassium phosphate c c	17 8	25.2	31 0	35 7	40 5	45 0	47 0	50 2
Alkaline sodium phosphate c.c	82 2	74 8	69 0	64 3	59 5	55 0	53 0	49 8

The solutions thus made are put in small test tubes (a convenient size is 10 by 75 mm) and stoppered or sealed off These standard tubes should be kept in a dark place when not in use

The standard bicarbonate solution is prepared either by weighing out 0 530 gm of desiccated sodium carbonate or by measuring accurately 100 c c of tenth normal sodium hydroxid into a 1 liter volumetric flask Two hundred c c of 0 01 per cent phenolsulphonephthalein are added, and the whole is made up to the mark with distilled water Carbon dioxid from a cylinder or from the lungs may be passed through this solution to convert the alkali into bicarbonate, or the solution may simply be used as it is, as the alveolar air that will be blown through the solution subsequently will accomplish the same purpose

The comparison with the standard colors is conveniently made with a box similar to that used with the Sahli hemoglobinometer, but containing three instead of two holes It is a small, flat box of blackened metal, 55 by 45 by 20 mm , backed with opal glass and with three slits open on the front By the use of this device, slight color changes may be easily detected, and the temperature of the tubes is not raised by the heat of the hands In addition, the whole device, with tubes, may be immersed in water at a given temperature

All of the standard solutions used in this method should be kept in glass which does not readily give off alkali, that is to say, such a glass as "Jena," "Non-sol" or "Pyrex" A small amount of toluene or thymol added to each solution serves to prevent the growth of molds

TECHNIC OF THE METHOD OF ANALYSIS

In analyzing a sample of air, about 2 or 3 c c of the standard bicarbonate solution are poured into a clean test tube of the same diameter as the tubes containing standard phosphate solutions, but from 100 to 150 mm long Air from the bag is then blown through the solution by means of a glass tube drawn out to a fine capillary point, until the solution is saturated, as shown by the fact that no further color change occurs[12] The tube is stoppered and the color immediately compared with that in the standard tubes By interpolation, one can readily read to millimeters Color changes are not quite so sharp above 35 mm as at the lower end of the scale but here changes are of less significance In making the color comparisons, the solution being compared is placed between the two standards which it most nearly matches When there is doubt as to whether the color of the solution is higher or lower than one of the standards, changing the order in which the tubes are placed in the comparison box will generally make the relationships clear

The standard solutions described are so prepared as to give correct results when the determination is carried out at a temperature of from 20 to 25 C (from 68 to 77 F) When the room temperature is considerably higher or lower than these points it is advisable to immerse the tubes in water at approximately 25 C during the blowing They may be removed from the water for the color comparison, however, provided this is quickly made The differences due to the ranges of temperature occurring under ordinary circumstances are practically negligible

No correction for barometric pressure is required as from the nature of the determination barometric fluctuations are self-corrective Variations in the temperature of the subject are never great enough to affect the value as much as 1 mm , and therefore may be neglected

RESULTS

If the simple conditions described above for the collection and analysis of air samples are complied with, duplicate determinations usually agree within 2 mm More than one determination should be made in every instance, especially in confirmation of a low tension, since errors in the technic of collection of the sample lead to too low rather than to too high results

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[10] Levy R L Rowntree L G, and Marriott, W M A Simple Method for Determining Variations in the Hydrogen Ion Concentration of the Blood Arch Int Med September 1915 p 389

[11] Standardized phosphate mixtures, sealed in tubes the standard bicarbonate solution, tubes color comparison box and other accessories may be obtained from Hynson Westcott & Co Baltimore

[12] If the operator first blows his own breath through the solution so as to bring it into approximate equilibrium with alveolar air saturation may be accomplished with as little as 100 c c of air from the bag blown through during thirty seconds The same bicarbonate solutions may be used for repeated determinations

In the case of failure of successive determinations to agree, the fault is much more likely to lie in the collection than in the analysis of the sample

In normal adults at rest, the carbon dioxid tension in the alveolar air, determined as described above, varies from 40 to 45 mm Tensions between 30 and 35 mm are indicative of a mild degree of acidosis When the tension is as low as 20 mm, the individual may be considered in imminent danger In coma, associated with acidosis, the tension may be as low as 8 or 10 mm In infants, the tension of carbon dioxid is from 3 to 5 mm lower than in adults

Conditions other than acidosis may affect the carbon dioxid tension Stimulation of the respiratory center leads to increased pulmonary ventilation and a consequent lowering of the alveolar carbon dioxid tension Such stimulation may be brought about by caffein,[1] and possibly also by intracranial lesions The respiratory center may be depressed by morphin, and as the result of certain[13] infections This leads to an increased carbon dioxid tension Changes in the excitability of the respiratory center, however, are but rarely great enough to affect significantly the composition of the alveolar air

"Alveolar" air collected as described above is essentially air which has come in equilibrium with the venous blood in the pulmonary capillaries The tension of carbon dioxid is approximately that in the venous blood "Alveolar" air collected by the Haldane or Friederecia methods is air which has come in approximate equilibrium with the arterial blood and hence is of a carbon dioxid tension from 10 [illegible] per cent lower

Changes in the pulmonary epithelium such as would prevent the air in the lungs from coming in equilibrium with the blood in the capillaries would, of necessity, affect the composition of the alveolar air Since very little is known as yet regarding the exact effect of such changes, one is hardly justified in drawing conclusions regarding acidosis from the composition of the alveolar air in patients with pulmonary affections[13]

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[13] Means, Newburgh and Porter Boston Med and Surg Jour, 1915, clxxiii, 742

Earliest Connection of Plague with Rodents—The Biblical use of the word "plague" is, like its medieval use, more often than not, in the general sense of a pestilence or epidemic disease, rather than in the specific sense of the disease now known as bubonic plague The expression "a plague of leprosy" is a common one and there is no reason to suppose that any of the ten plagues of Egypt were of the character of the malady now under discussion But in a few instances there are some grounds for believing that the disease mentioned was in truth bubonic plague and no other The most remarkable reference is found in 1 Samuel iv, v, vi, where the Philistines were smitten with emerods or tumors in their secret parts The Ark was sent to Gath, then to Ekron, and the plague followed it In the meantime there seems to have been a veritable plague of mice In the ordinary version there is only incidental reference to "the mice that mar the land" (1 Sam vi, 5), but in the Septuagint version the references are more distinct, "in the midst of the land thereof mice were brought forth, and there was a great and deadly destruction in the city," and further (1 Sam vi, 1) that 'their land swarmed with mice" The Philistines returned the Ark to Beth-shemesh, with golden images of the tumors and of the mice, but still the plague followed it, and no less than 50 070 persons perished. This is the earliest reference connecting bubonic plague with rodents, and it has taken three thousand years to invent the rat flea and its specific bacillus as agents for spreading the disease—John W Fries, *Southern Medical Journal*

SOME MODERN VIEWS OF SYPHILIS OF THE NERVOUS SYSTEM

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About forty years ago when Fournier had the temerity to intimate that in the great majority of cases of locomotor ataxia syphilis was the cause, Ricord, his confrère and the most prominent syphilographer of the day, said that Fournier had taken on himself a very bad burden A few years later, when Erb in Heidelburg assumed responsibility for a similar point of view, medical Germany was mobilized against him So the matter stood for some years and was threshed out with acrimony on both sides

Later, Negeotte brought forth his epoch-making observation, that in locomotor ataxia there is invariably some evidence of inflammation in the meninges of the cord Following the practice of Quincke, the routine examination of the spinal fluid determined the presence of cellular peculiarities invariably present in cases of locomotor ataxia as well as in those of general paresis General paresis and locomotor ataxia from that time have proceeded side by side in the estimation of the medical profession as either being caused by syphilis or being intimately associated with syphilitic processes affecting the neural axis

Then came Schaudinn with the discovery of the spirochete as the actual cause of syphilis, closely followed by Wassermann, whose reaction proved the essential fact of syphilis in these diseases The matter has been finally and positively clinched through the discovery, by Moore and Noguchi, of the spirochete in the lesions of tabes and general paresis Now we are in a position to say that locomotor ataxia and general paresis are manifestations of syphilis We should no longer use the terms "parasyphilis" or "metasyphilis," coined by Fournier and his followers, because we are dealing with actual syphilis — with late syphilis

PREVALENCE OF SYPHILIS

For a great many years writers and teachers have contended that there was wide prevalence of syphilis, especially in urban populations Approximations, based on clinical histories and objective signs, both in private practice and in hospitals, indicated that about 20 to 25 per cent of all adult males were syphilitic If this is true, the question as to how many of this tremendous army of syphilitics are subsequently to develop syphilis of the cerebrospinal system is of the utmost importance Only since we have had the advantage of the Wassermann reaction as a means of diagnosis have we been in a position practically to solve the problem

The report of Vedder[1] on syphilis among recruits is instructive The examinations on which this report is based were made at Fort Slocum, near New York, and at Jefferson Barracks, near St Louis In New York the majority of those applying for admission to the army were of city extraction and habits, while those in St Louis came largely from the surrounding country districts Of all who applied, only those were accepted who were physically fit, and those who showed evidences of syphilis or gave a history of recent syphilis were excluded Out of the entire number applying, only 17 per cent were accepted, that is to say 83 per cent. were rejected. In the 17 per cent. selected the Wassermann test of the blood, made apparently with scrupulous care and checked by competent associate observers, indicated that 16.7 per cent. were syphilitic. The astonishing and alarming fact stands out that the rural population at Jefferson Barracks seemed to have nearly as high a percentage of syphilis as the urban population examined at Fort Slocum. We are therefore clearly within conservative lines when we estimate that one man in every five is syphilitic.

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[1] Vedder Prevalence of Syphilis in the Army Surg Gen Bull 8, June 1915

PREVALENCE OF NERVOUS SYPHILIS

Now the question is, if so many people are syphilitic, how many will have syphilis of the nervous system? Examinations of the spinal fluid in cases of primary and secondary syphilis, according to Finger, give positive reaction for the various tests in 70 per cent. of cases; that is to say, in early syphilis the spinal fluid shows an actual syphilitic process in the nervous apparatus seven times in ten. Altmann and Dreyfuss found this to be true in 82 per cent. of cases. Still further, Hoffmann, Nichols and Steiner have found that, in 15 per cent. of cases in the primary and secondary stages, before changes can be found by Wassermann or other reaction, these spinal fluids are infectious and the disease can be transmitted by their inoculation.

Here emerges the astounding fact, that every case of syphilis from the very first is a case of cerebrospinal syphilis, of nervous syphilis, and that no case of syphilis runs its course, even for a short time, without producing changes in the neural apparatus. Such changes formerly were considered to be a late complication. The ectodermal origin of the neural axis may explain the early involvement of these tissues by a disease marked preeminently by skin lesions.

Thanks to the newer serologic tests, we are awakened to the fact that nervous syphilis has a much wider clinical territory than was even suspected. For instance, Collins,[2] excluding tabes, general paresis and the usual forms of cerebrospinal syphilis, is able to tabulate 245 cases encountered within a short time in his division at the New York Neurological Institute. These syphilitic cases were recognized only by means of the blood and spinal fluid investigations.

FREQUENCY OF TABES AND GENERAL PARESIS

What is the frequency of the late syphilis, which we formerly called parasyphilis or metasyphilis, of tabes, optic atrophies and general paresis?

White, in an examination of 1,016 cases of syphilitic men, found these late syphilitic manifestations in about 1 per cent. Pick and Bandler found paresis in 2.12 per cent. But the most significant statistics that I have found are those tabulated by Mattuschek and Pilcz. They have the detailed histories of 4,134 Austrian army officers who were infected with syphilis between 1880 and 1890, and these cases, which were complete in every detail and brought down to the year 1912, were then reviewed. As you can understand, in the Austrian army the records are reliable and complete, and after such a period of time they would justify definite deductions. Out of this large number, over 4,000 syphilized men, examined twenty-two years after the last of them were infected, Mattuschek and Pilcz found that 4.67 per cent. had developed paresis, more than 1.5 per cent. had developed tabes, or 6.27 per cent. had developed one or both of these diseases. Through all the usual manifestations of syphilis, 20 per cent. of the 4,134 had greatly abridged or lost their lives.

There is, apparently, a peculiar difference in the susceptibility of men and women to the development of these late forms of syphilis. Fischer examined 1,178 syphilitic men and found 3.7 per cent. paretic, while in 888 women he found 0.5 per cent.; that is to say, women are apparently less susceptible to tabes and paresis than are men. But perhaps an explanation of this peculiar sex variation can be found, and I will revert to the matter a little later.

VARIATIONS OF THE SYPHILITIC ORGANISM

It is an interesting fact that Schaudinn was not a physician but a zoologist. The discovery of the spirillum of syphilis was, in a sense, accidental, in that Schaudinn was selected, in conjunction with Hoffmann, by a committee of the German Academy of Sciences, to investigate the contention of Siegel, that he had found a certain organism, the *Cytorrhyctes luis*, in syphilitic lesions and claimed it to be the cause of syphilis. It was established that this organism has nothing at all to do with syphilis, but it plays an important role in having led to the detection of the spirochete. Schaudinn had been deeply interested in the spirilla of animal diseases, in African sleeping sickness and in the relapsing fevers, and with a mind saturated with the subject, he turned his attention to syphilis, naturally first looking for those forms of life with which he was on familiar terms, and he shortly detected the *Spirochaeta pallida*.

This spirochete is not the simple animal that was first supposed, but is capable of great variations in character and in clinical manifestations.

VARIATIONS IN VIVO

The spirochete presents variable strains. It has not the simplicity of the bacteria, although, thanks to Rosenow we now look on bacteria as capable of great morphologic and clinical differences.

Clinically, for a long period of years it has been recognized that syphilis is not always the same thing, and it has been known to clinicians that there is a variety of syphilis which might be called nervous syphilis. The French observers have been particularly active in gathering data on this point of view. I remember one report concerning five young soldiers who were syphilized from the same source at the same time, four of whom developed general paresis and one developed locomotor ataxia.

A more interesting case is mentioned incidentally by Erb, but was first published by Lavelle. It is the tragic story of a Martha X., who in 1870 was the mistress of a medical student who died in 1873 of cerebral syphilis. In 1871 she transferred to a second medical student, who afterward married and had healthy children, but died in 1880 of general paresis. In the following year she took up with a third student, who also later had healthy children in wedlock, but died in 1882 of general paresis. Then a chemist fell under her spells, and he died in 1890 of general paresis. He was followed by an engineer, who in 1893 died of general paresis. An interesting point here is, that the first victim died of cerebrospinal syphilis and his successors perished from general paresis, a clinical variation that is to be correlated with spirochetal variation.

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[2] Collins: New York Med. Jour., 1916, ciii, 389.

Clinicians have seen cases of locomotor ataxia in husband and wife, and all clinicians in the field of mental disease have seen husband and wife present general paresis Conjugal syphilis, conjugal general paresis, conjugal tabes, and conjugal optic atrophy are common terms In these cases generally the wife has contracted the disease in wedlock from her husband In nearly all such cases, as is a common observation in the syphilis of married women, there is no history of a primary lesion, and secondaries have been slight or entirely unobserved The wife has contracted a syphilis of a modified character, in other words, the spirochete has undergone variation in vivo

Herein may be the explanation of the reduced incidence of tabes and general paresis in syphilitic women The conjugal cases, however, may indicate that syphilitic infection is possible in very late stages of syphilis, and then it produces a similar form of disease As a matter of fact, even the unmarked wives and children of paretics and tabetics will usually be found to be Wassermann positive

Ehrlich agreed with the view that spirochetes produce self-destructive antibodies in the human organism A few of the original strain, of superior vital qualities, perhaps, are able to persist in spite of the antagonism of the antibodies, and they propagate a second strain, which in its turn arouses the forces of resistance, and so on ad infinitum Finally, a strain is evolved which is apparently of a lowered fecundity, but of increased resistiveness, and the condition then tends to come to a standstill In the final stage probably the organism acquires an immunity to the usual remedies Here is possibly an explanation of the fact that in locomotor ataxia and general paresis mercury and the iodids are of much less value than in the conditions which precede, such as cerebrospinal syphilis, the arteriomeningeal lesions, and the ordinary manifestations of the tertiary stage Indeed, syphilitic lesions marked by gummy processes rarely are followed by the so-called parasyphilitic disorders In this clinical observation we see the manifestation of another variation of the spirochete

VARIATIONS IN VITRO

Variation of the organism has been confirmed by experiments in the laboratory Noguchi found that the spirochetes obtained from the brains of general paretics required for their development and propagation about sixty to eighty days, Graves of St Louis, using the blood of general paretics, found that he could produce syphilitic lesions in rabbits by inoculation, but that it required about sixty days, and both these investigators found that with spirochetes obtained from early stages of syphilis three or four weeks were sufficient The late-stage organism had clearly undergone a differentiation

Today in Washington, in the laboratory of the Army Medical School,[3] the investigators can produce several arieties of spirochete They can breed a variety hich will produce a hard chancre, or a variety which ll produce a chancre lacking the old hunterian chareristics of a saucerlike, indurated base They can duce a spirochete which will give a rich muconeous efflorescence, or a spirochete which will be in cutaneous manifestations, with a tendency to [illegible] influence on the nervous system Perhaps reach a time when, if we can determine the rnal the infection of a syphilitic patient, the stage of the disease and its characteristics in the carrier, we may be able to draw some conclusion as to the course that lies before the patient, and the nature of the clinical history which he may be expected to run

What of the various methods of intracranial, intraspinal, intravenous, and combined applications of the arsenicals and mercurials? I must admit that all of these measures thus far have not enabled us to cure or positively arrest locomotor ataxia or general paresis In those cases in which the lesions have not reached the stage of latest syphilis, those in which the disease falls especially on the vessels and the meninges, the prospects of cure are of the very best It is essential in the conduct of such treatment that we be guided, not by the Wassermann in the blood, but by the condition of the cerebrospinal fluid No man, in my estimation, is giving his patient the best treatment, or even the proper treatment, who withholds the administration of these remedies before he has obtained, for a period of years, negative results by the Wassermann, the other accepted tests, and the cytologic count in the spinal fluid The granting of marriage certificates to those who have had syphilis should not turn on the examination of the blood by the Wassermann method, but on careful examination of the spinal fluid

The problem of treatment appears not to be one of the surgical or mechanical administration of the old or new remedies, but the discovery of some agent particularly biocidal to the organism in its latest variations

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communication to the author

RECURRENT GENERALIZED HERPES OF INFECTIOUS ORIGIN

REPORT OF A CASE *

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This report of a case of generalized herpes simplex that was recurrent over a period of two years will undoubtedly show its infectious origin This type of herpes is rare, and the observations made offer suggestions as to the etiology of the more common herpes simplex

Cases of herpes may be roughly divided into three groups Though in all three groups the skin lesions show a necrosis and exudation of varying intensity, these and other pathologic findings are most pronounced in the herpes zoster group Von Barensprung[1] and others described changes in the posterior root ganglion in herpes zoster, but it remained for Head and Campbell[2] to describe these changes in detail They found, in the ganglion of the posterior root of a part corresponding to terminal skin lesions, changes of acute degeneration, that is, exudation of round cells and hemorrhages, and destruction of cells and fibers They found acute degeneration and sclerosis in the posterior nerve roots, in the peripheral nerves and the posterior columns of the cord

The recent work of Rosenow and Oftedal[3] has

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* Read before the Society of Alumni, Lebanon Hospital February, 1916

[1] Von Barensprung Annalen d Charite Krankenh, ix, *1861*

[2] Head and Campbell Brain *1900*, xxiii

[3] Rosenow, E C and Oftedal, S The Etiology and Experimental Production of Herpes Zoster, The Journal A M A June 12 1915 p *1968*

added much to our knowledge of herpes Streptococci were isolated from removed tonsils, and from pyorrheal pockets and spinal fluid of herpes zoster patients, these were injected into animals with resulting lesions of herpes and changes in the vagus and sympathetic ganglia Gram-staining diplococci and diplococci in chains were found in and about the ganglia Other streptococci or those isolated from tonsils or elsewhere after the patient is cured, do not manifest this similar elective localization when injected into animals The cultures from peripheral lesions were negative This work appears to be confirmatory evidence of the infectious origin of herpes zoster

In a second group of herpes, those due to a known toxic or infectious agent like changes have been described in the posterior root ganglion Acute inflammatory changes in the gasserian ganglion have been described when herpes occurred during cerebrospinal meningitis[4] pneumonia,[5] arsenic, carbonic oxid poisoning, etc Sunde[6] found a gram-positive diplococcus in the gasserian ganglion of a man with herpes who died of pneumonia

In these two classes of herpes, herpes zoster and the toxic or infectious cases, the lesions of the nervous system and the microbic origin are established

On the other hand in still another group, that of herpes simplex, there is no direct evidence of changes in the ganglia Heretofore no micro-organism has been found in the terminal lesions and there has also been absence of other evidence of the infectious nature of herpes simplex

In my case of generalized herpes simplex, the causative organism — a streptococcus — was isolated It is termed 'simplex" because it accompanied no infectious disease, it was due to no known toxic poison, nor was it a herpes zoster

The case is of special interest because of (1) its recurrence over a period of two years, (2) the isolation of the causative organism, streptococcus, (3) its cure by vaccine therapy

Much information and data were kindly furnished by Dr M Salzer of Cincinnati, who treated this patient several months before she was seen by me, and to whom my thanks are due Dr Berghausen of Cincinnati made the original cultures and vaccine

REPORT OF CASE

Mrs X., aged 30, past history negative, for over two years had been having almost continuous crops of herpetic eruptions The parts chiefly affected were lips, nose, both ears, chest, both wrists, occasionally the leg and forearm The lesions consisted of vesicles, very fine to pinhead in size, on a base that was red and swollen Contents of vesicles were clear and would dry up with practically no scaling

A typical attack would be preceded by much itching and burning and swelling of the lips There would be chilly sensations down the spine, profound depression of spirits and total loss of appetite Then numbers of fine vesicles would appear on a reddened base on the much swollen lips These would be followed by lesions on the nose ears and elsewhere Itching and burning continued throughout

Physical Examination—The patient looked thin and anemic, she had lost about 12 pounds in weight There was a marked lateral curvature of the spine All organs were normal Temperature and pulse rate were normal Blood examination showed a secondary anemia, otherwise negative The Wassermann was negative Roentgen-ray examination of the chest, abdomen head—sinuses and teeth—was negative There was very little tonsillar tissue

Special efforts were made to locate the source of infection in the tonsils, teeth or sinuses without success

Blood culture was negative Cultures, however, made on blood agar of material aspirated from vesicles, and probably some from tissue about the vesicles showed a streptococcus in long chains From subcultures a vaccine was made

The patient was injected with this autogenous vaccine in doses ranging from 100 million to 1 billion bacteria Injections were given every three or four days Reactions followed injections, outbreak of herpetic lesions, and rise of temperature with larger doses After five weeks of this treatment by Dr Salzer, the patient came under my care

The disease had now lasted over two years, and protracted stays in bed were the only means which seemed to check attacks All the usual methods of treatment, external, internal hypodermic, change of climate etc., were tried

It seemed to me that, as there was some amelioration in the symptoms, gain in strength and lengthening of intervals between attacks it would be best to continue the only measure that brought relief outside of rest, the vaccine method of treatment It was essential to use the patient's own organism as vaccination with other strains of streptococci would not according to Rosenow's findings, have produced the antibodies of her particular strain In an endeavor to do away with the negative phase and in order to give larger doses I sensitized the autogenous vaccine

Sensitization was performed by adding to every cubic centimeter of autogenous vaccine 2 c c of a polyvalent antistreptococcus serum This was placed in a thermostat at 37 C (98 6 F) for twenty-four hours and shaken frequently The preparation was centrifuged The bacteria were then washed free of serum with sterile saline After testing sterility the bacteria plus antibody, were ready for injection

Six injections of this sensitized autogenous vaccine were given in one month The dose was increased from 200 million to 2 billion bacteria There were no local reactions until the two largest (1½ and 2 billions) were reached, when there was a slight outbreak of the eruption There were minor constitutional reactions at times, such as depression of spirits chilliness and loss of appetite following injections, but a gain in well-being strength and in weight was almost immediate One more injection quickly controlled a slight outbreak that occurred about a month after treatment had been discontinued

Five months have elapsed since, and there has been no recurrence, meanwhile the patient has gained 11 pounds in weight, and she is strong and happy

CONCLUSIONS

The isolation of the micro-organism from the skin lesion, the institution of a negative phase by its injection, with skin manifestations, and the cure, unattainable by any other means than the increase of immunity for the streptococcus by the injection of streptococcus vaccines, are all direct evidence of the infectious nature of this herpes It is therefore a step toward proving the infectious origin of herpes simplex, and another step in the direction of showing the common origin of all herpes

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The Care of Epileptics.—Thirteen states have colonies for epileptics The total number of epileptics in the United States is 200 000 Of these only 3½ per cent are properly cared for Of 1,320 deaths in the Craig colony 513 were due to causes related to epilepsy The average age at death was 30 years In 600 necropsies about 60 per cent showed gross brain lesions, but only a very few showed anything that might have been treated surgically The most striking and frequent change was enlarged lateral ventricles and cystic or granular choroids —Twenty-Second Annual Report of the Craig Colony for Epileptics, New York.

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[4] Councilman Mallory and Wright Massachusetts State Board Reports 1898

[5] Howard W T Jr Am Jour Med Sc. cxxv 256.

[6] Sunde Deutsch med Wchnschr 1913 xxxix.

SOME OF THE SURGICAL ASPECTS OF PAINFUL BACK

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I wish to consider a condition equally as important as arthritis of the spine or sacro-iliac subluxation, although it is not so common It is a condition more common than is generally supposed, and equally as potent a factor in the causation of sciatica, scoliosis and painful back I refer to a class in which, in the past, operation has been performed for various supposed pelvic and abdominal conditions, also for cord tumors and Pott's disease, or they have been treated medically for lumbago, rheumatism and sciatica without relief

The cause of pain and disability in these cases is an anatomic variation in the shape or size of the transverse process of the fifth lumbar vertebra, sometimes spoken of as the lumbar rib A study of the roentgenograms of the lumbar and pelvic region shows that variation in the size and shape of the lumbar process occurs as frequently as anatomic variations in other parts of the body Adams[1] reports a study of fifty consecutive cases in the Massachusetts General Hospital in which careful Roentgen examinations were made Of these, forty-four cases showed bony defects in the sacrum or fourth and fifth lumbar vertebrae Seven of these showed an anomaly of the fifth lumbar inferior articular process, and two others showed an enlargement of the transverse process

In the majority of cases the condition is undoubtedly an acquirement during the years devoted to hard labor, especially in people following occupations requiring an unnatural posture, such as woodchoppers, automobile repairmen, washerwomen, sailors, etc For this reason it is more common in middle adult life and among the male sex, although Kleinschmidt[2] reports a case in which the symptoms first appeared at the age of 5, and Adams[3] one case in a girl of 16 who was operated on It is evident that while occupation is the chief contributing cause of enlargement of the fifth lumbar transverse process, it is not the only one Meisenbach[4] reports a case of fracture with a large callous formation, as does Ferrall[5] Infectious diseases, especially syphilis, are probably an etiologic factor Denuce[6] reports a case of enlargement, as shown by the Roentgen ray, associated with sciatica, in which the patient recovered under antisyphilitic treatment

The factors involved in the production of pain are apparently not the same in all cases There are several possible ways in which the pain may be caused, one by impingement of the process on the ilium separating the sacro-iliac joint The transverse process may act as a fulcrum separating the sacrolumbar joint There is a third possibility, as indicated by the case of Adams,[3] in which an erosion of the ilium occurred as the result of constant friction Irritation may set up a hyperplasia of the surrounding soft tissues which might include the nerve, or direct pressure on the nerve itself, as a cervical rib presses on the brachial plexus, illustrated by Kleinschmidt[2] and by my own case

The roots of the fifth lumbar nerve originate from the spinal cord between the levels of the twelfth dorsal and first lumbar vertebrae They enter into the formation of the cauda equina, and combining, take exit through the intervertebral foramina between the last lumbar vertebra and the sacrum, as the fifth lumbar nerve The anterior primary division of the fifth nerve descends over the ala of the sacrum and divides into the anterior and posterior parts, which are joined by corresponding parts of the fourth lumbar nerve The two resulting trunks are known as the lumbosacral cord The anterior part contributes to the formation of the tibial and the posterior part to the peroneal nerve The lumbosacral cord lies directly on the bones of the linea innominata, whereas the other portions of the sacral plexus lie on the pyriform muscle

The fifth lumbar nerve, through the sacral plexus, supplies sensory fibers to the outer side of the leg, to the inner side of the dorsum of the foot, the back of the leg, the inner and outer sides of the great, second and third toes, and the inner side of the fourth toe It sends motor fibers to the gluteus maximus, minimus and medius, the short head of the biceps, the semimembranosus and semitendinosus, the long head of the biceps, and a number of muscles on the back of the leg, the inner and outer sides of the front of the leg, and the inner side of the sole of the foot

The remarkable fact has been noted (Oppenheim[7]) that in cases in which compression or other injury affects the sciatic in the pelvis, the paralytic symptoms are most marked in the peroneal nerve, presumably because its fibers lie directly on the bone

In a careful search of the literature I have been able to find but twenty cases reported Six of these patients were not operated on Of these, four cases (6 and 14) were lost track of The other two, including the case of Denuce,[6] mentioned above, and a case of Calve's[8] showed improvement Fifteen patients were operated on with the results given in the accompanying tabulation

In addition to these I wish to report three cases One of the patients was operated on by Dr P B Magnuson, and one by myself The third patient refuses operation at the present time, but is still under observation In Case 1 the history was furnished by Dr Magnuson

Case 1 —*History*—Mrs S W, a housewife, aged 35, white, was admitted to Wesley Hospital, Jan 13, 1915 Her family history was negative, as was also the menstrual history, she had had no past illness She had two children, both normal births

Eight years ago, following the birth of her last child, the patient noticed pain on the left side over the left upper sacral region which radiated down over the sciatic nerve back of the left knee This was exaggerated by bending over the washtub or lifting This pain has continued in greater or less severity, depending on the labor performed, until the present date

About six years ago the patient noticed a mild pain on the right side in the upper sacral region, but about 1½ or 2 inches further away from the spine than the pain on the left side which greatly increased until at the present time she is unable to stand erect, leaning toward the left Flexion is limited toward the right, flexion forward relieves the pain somewhat on the right side, but increases it on the left side There is no pain radiating down the sciatic nerve on the right side It is constant and continuous in one spot Roentgenoscopy reveals a long lateral process on the fifth lumbar vertebra on the right side impinging against the crest of the ilium at the point which corresponds to the area of the intestines and the seat of pain on the right

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[1] Adams Z B The Relation of Bony Anomalies of the Lumbar and Sacral Spine to the Cause and Treatment of Scoliosis, Am Jour Orthop Surg, 1914 1915 xii, 45

[2] Kleinschmidt, quoted by Denuce Centralbl f Chir, 1912, xxxix, 645

[3] Adams, Z B Am Jour Orthop Surg, 1910 1911, viii 299

[4] Meisenbach, Roland, in discussion of Fassett, F J Late Results of Excision of the Transverse Process of the Fifth Lumbar Vertebra, The Journal A M A, Nov -, 1915, p 1775

[5] Ferrall, O An Anatomic Explanation of Many Cases of Low Backache and Sciatica, New Orleans Med and Surg Jour, 1914 1915, lxvii 608

[6] Denuce Rev d'orthop, December, 1913, p 531

[7] Oppenheim Text Book of Nervous Diseases, i, 461

[8] Calve Orthop et tuberc chir, *1914, i 376*

The patient has spent the last six months in bed The back is flat in the lumbar region, and there is some rotation of the spine toward the left

Operation and Result—The patient was operated on Jan 21 1915 A longitudinal semilunar incision with the convexity toward the right was made from the spine The lumbar muscles were pulled aside, and the fifth lumbar lateral process was exposed deep down under the muscles An attempt was made to introduce a periosteotome between this process and the ilium which was unsuccessful The process impinged and apparently was adherent to the crest of the ilium With a Fenger dissector bent under the process at the base a thin bladed chisel was driven down through it transversely It was then grasped with an 8 inch forceps and pulled out The left sacro-iliac joint was then exposed, the ligaments cut, and with a lever this joint was pried in such a way as to pull the sacrum back and pry the ilium forward, after which the ligaments were sutured and the wound closed

RESULTS OF OPERATION

Author	Publication	No of Cases	No of Operations	Results
Adams	Am Jour Orthop Surg 1910 1911 viii 299	1	1	Perfect
Kleinschmidt	Zentralbl f Chir, 1912 xxxix 645	1	1	Fair
Blanchard and Parker	Am Jour Orthop Surg xiii No 2	1	1	Perfect
Fassett	The Journal Nov 20 1915, p 1775	3	5	Good
Henderson	The Journal Nov 20 1915 p 1775 Am Jour Orthop Surg 1914 1915, xii 54	3	3	1 poor 1 good 1 too recent to report
Ryerson	The Journal Nov 20 1915 p 1775 ibid Jan 2 1915 p 24	2	1 resection 1 Albee operation to prevent stooping forward	Good Good
Lord	The Journal Nov 20 1915 p 1775	1	1	Good
Reilly	Am Jour Orthop Surg 1914 1915 xii 54	1	1	Perfect
Meisenbach	The Journal Nov 20 1915 p 1775	1	Old fracture with callus removed by saw	Good
Goldthwaite	Boston Med and Surg Jour 1911 clxiv 365	1	Process not removed laminectomy for cauda equina tumor	Poor

The patient remained in bed lying on her face or side, for six weeks, and according to her statement she had less pain following the operation than she had had at any time for the last six years At the end of six weeks a straight, front laced corset with heavy band and buckle around the hips was applied, and the patient was allowed to stand on her feet at the end of eight weeks She went home during the ninth week, and when she was last seen by the operator, about five months after leaving the hospital, she had gained 20 pounds in weight, was doing her own housework, including the washing, said she had not had any pain in her back, that she was no longer nervous as she had been before the operation and from her own statement was completely cured of her trouble

Case 2—*History*—H M, man, referred for operation by Dr M T Goldstine, entered my service at Wesley Memorial Hospital, Aug 4, 1915 He was by occupation a butcher, aged 37, married Family and past history were negative

For six months previous to entering the hospital the patient had complained of aching pain over the right hip and right lower lumbar region The pain gradually increased in severity until for a period of six weeks before entering the hospital he was unable to assume an upright position At this time the pain radiated downward and into the peroneal group of muscles He consulted physicians who treated him for arthritis and lumbago without any improvement Even under immobilization the condition became worse Physical examination showed a well developed man of about 170 pounds He was unable to stand erect, there was marked lateral curvature of the spine convex to the right, slight atrophy of the gluteal muscles, and marked atrophy of the peroneal group There was tenderness just above the right sacro-iliac joint, and rigidity of the lower vertebrae

The head, neck, chest and abdomen were negative The right knee jerk was exaggerated, the left normal, other reflexes normal There was tenderness over the peroneal muscles of the right leg

The laboratory findings blood, urine and Wassermann test were negative A roentgenogram showed a large bifid, transverse process on the left side of the fifth lumbar vertebra The right transverse process was a straight prolongation pointing outward and downward, impinging on the sacro-iliac articulation

Operation and Result—A curved incision was made over the lower lumbar and sacral region to the right of the median line The lumbar muscles were split along the outer edge by blunt dissection and the transverse processes of the fourth and fifth lumbar vertebra exposed A curved periosteotome was used to free the anterior surface of the process pressing the nerve trunk gently out of the field During this maneuver one marked contracture of the leg occurred showing pressure on the nerve The instrument was then pressed up tightly against the spine and placed in the hands of an assistant with instructions to hold tightly against the process while with a hammer and chisel the process was removed

There was some separation of the sacro-iliac joint, which was curetted to obtain bony ankylosis The incision was closed in the usual manner

Although it was anticipated that the pain might be more severe for a few days after the operation, such was not the case The following day the patient stated that the pain was gone Recovery was uninterrupted A plaster cast was applied for a couple of weeks after the patient got up padded and cut in such a manner as to have a tendency to straighten the spine.

Within three months the patient had returned to his usual occupation, was absolutely free from pain, and had assumed his characteristic military attitude

Case 3—*History*—S M, man aged 42 single, a stationary engineer, was sent in to my service at Wesley Memorial Hospital by a physician who had diagnosed Pott's disease The family and past history were negative

About three months before entering the hospital the patient had what he called "a stitch in the back' He rested for a couple of weeks and was then able to return to work He was working in an artificial ice plant at the time Some weeks later he put in an extra hard day's work when other men were on a holiday From then on, pain was constant and the back seemed to be curved

Physical examination was negative except for a slight curvature of the spine, marked tenderness above the sacro-iliac joint on the right side, and some limitation of motion, although there was no rigidity of the spine

The laboratory findings were negative The Roentgen ray showed a large transverse process of the fifth lumbar vertebra

The patient refused operation, and therefore was put at rest He improved sufficiently to return to work, but is not free from pain

25 East Washington Street

CAROTID TUMOR AND ANEURYSM OF THE INTERNAL CAROTID

REPORTS OF CASES

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The common carotid has been ligated many times, and the reason for reporting these cases is not that this operation was performed, but because the two conditions for which it was ligated are rare

CASE 1—A young woman, aged 16, had, on the right side of her neck a hard lump, deeply seated, and about opposite the hyoid bone It presented just in front of the anterior margin of the sternocleidomastoid muscle It was slightly movable from side to side, but not movable in the vertical direction Its position was so deep that it seemed to be in very close relationship to the transverse processes of the cervical vertebrae The patient had suffered no inconvenience from the mass, there were no symptoms, and the reason she came for operation was the presence of a growing lump in her neck Examination showed no evidence of pressure on either the pneumogastric, hypoglossal or recurrent laryngeal nerves The lump was single, and the most careful palpation failed to reveal the presence of other masses in the neck Because it was so firm, so fixed, single, and so deeply seated, it was thought to be a sarcoma, but a diagnosis of carotid tumor was not made before operation An incision was made along the anterior margin of the sternomastoid muscle, and the lump isolated It was found to be firm in consistency, not attached to the vertebrae, and after careful dissection, it was seen that the common carotid artery tunneled the growth The internal jugular vein was firmly incorporated in the mass, but the pneumogastric nerve was not seen The growth could not be removed without the removal of the entire carotid sheath, so that the common carotid artery and the internal jugular vein were ligated above and below the growth, and the mass lifted out Almost immediately after the proximal ligature was applied, the anesthetist noticed a marked change in the character of the pulse Up until this time, the patient had been taking a quiet anesthetic with a good pulse The pulse immediately became very fast, but was still regular The operation was hastily concluded The wound was sutured without drainage, and the patient returned to bed with a pulse around 160 The pulse did not improve, continued rapid, and indeed, at times, was above 180 It was regular, however, and of fair volume This rapid pulse continued four days, but during this time, the appearance of the patient was good In spite of the rapid pulse, she had very little discomfort, no dyspnea, and no cyanosis The only treatment during this time was an ice bag over the heart, and hypodermic doses of morphin After four days of this rapid pulse, the patient was given strychnin nitrate, 1/80 grain hypodermically Within a few hours from the beginning of the administration of the strychnin, the pulse rapidly improved, and on the morning of the fifth day was 100 This patient made an otherwise uninterrupted recovery, and recently, after a lapse of nearly five years, returned to the hospital with a chronic appendicitis, for which the appendix was removed At this time, there was no evidence of recurrence

Carotid tumors are seldom reported in the literature Frazier[1] reports sixty instances collected from the literature, twenty-nine of these cases were reported by Keen and Funke,[2] and thirty-one by Callison and MacKenty[3] Of these sixty cases, five were found at necropsy Graham[4] reported that he found thirty-five cases with thirty-four complete case reports, and added two of his own, which made thirty-six complete reports Of these thirty-six, all three carotids were tied twenty-two times, the external carotid only five times The tumor was removed without ligation seven times There were evidences of vagus disturbances six times The hypoglossal nerve was cut eight times Hemiplegia occurred five times, with one death There was recurrence in four cases, and an immediate mortality of six There was one cerebral hemorrhage with recovery Two cases of bilateral carotid tumors have been reported Since the foregoing reports, five additional cases have been reported, which, with the case just narrated, bring the total up to sixty-six

Hertzger[5] gives a full report of the pathology These tumors usually have a history of slow growth They are definitely encapsulated, noninfiltrating, do not return after complete removal, and give rise to no symptoms other than deformity Later on, however, as the tumor slowly increases in size, there may be many symptoms of pressure, interference with the recurrent laryngeal, hypoglossal and pneumogastric nerves, and pressure on the larynx Pathologists report these tumors either as endothelioma, sarcoma or more correctly, perithelioma It is usually impossible to dissect them away from the carotid vessels, and if the entire tumor is not removed they usually recur In the seven cases removed without ligation, in Graham's list, four recurred These tumors vary somewhat in location The tumor is usually found at the bifurcation of the common carotid In its growth it usually involves all three carotids in its mass Sometimes, however, the growth is entirely downward from the bifurcation, and in the latter group this case belongs Complete removal is always hazardous because of the accidents which follow ligation of the common carotid, and because the tenth nerve is often so incorporated into the mass that it cannot be seen as a separate tissue, and is therefore destroyed by ligation

The carotid body or gland, sometimes called the ganglion intercaroticum, was first described by Haller in 1743 It contains many nerve fibers and some ganglion cells, which led to the supposition that it belongs to the sympathetic nervous system The body is related to the chromaffin system, and experimental work shows that its function is not important nor even essential These tumors are usually mistaken for enlarged lymph nodes or lymphosarcoma They grow very slowly and usually do not attain excessive size Several of the cases reported were the size of a hen s egg, but most of the tumors were much smaller The close relationship of the mass to the carotid artery makes its differentiation from aneurysm at times difficult There is occasionally some vasomotor disturbance, irregular flushing of the face, and moderate exophthalmos In most of the cases reported the diagnosis was not made until after removal It is a disease which usually begins in the young, but no case has been reported before the eighteenth year In the sixty cases, nineteen occurred after 40 years of age Most surgeons have advised operating on these tumors only when they are seen early in their growth Later on, when they have reached considerable size, and have become widely attached, operation becomes much more difficult, with a high immediate mortality

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[1] Frazier Progr Med , March, 1914

[2] Funke South Med Jour , 1914, vii, 554

[3] Callison and MacKenty Ann Surg 1913 lviii, No 6

[4] Graham Cleveland Med Jour , 1913, xii

[5] Hertzger Treatise on Tumors

Case 2—Jan 11, 1915, a woman, aged 41, came into our care who was complaining of a mass in her throat, of gradually increasing dyspnea, very great shortness of breath on exertion some stridor, of a persistent and irritating cough, and considerable difficulty in swallowing On examination there was no external evidence of a mass but there projected into the pharynx behind the posterior pillar of the tonsil a mass whose surface was smooth, very elastic and tight on palpation and pulsating The pulsation was apparently expansile Bimanual examination with one finger in the pharynx disclosed a pulsating mass which could be compressed between the fingers so that its bulk was considerably lessened On pressure, there was a very loud bruit when the bell of the stethoscope was placed just behind the jaw and below the ear If the carotid were grasped between the thumb and finger through the sternomastoid muscle (Rouge s method) the pulsation in the mass disappeared and by pressing on the mass with the finger in the pharynx it largely disappeared The same disappearance of bruit and lessening in size of mass could be demonstrated by compressing the carotid arteries between the finger and the transverse processes of the cervical vertebrae The patient complained a great deal of a roaring sound which was very noticeable when she slept on that side This roaring was especially exaggerated when she was exercising She was seen by a number of surgeons, and various diagnoses were made The diagnoses narrowed themselves down to three aneurysm of the internal carotid tumor and cold abscess Roentgenoscopy of the cervical region revealed a very slight erosion of the transverse processes of the third and fourth cervical vertebrae There was no evidence of necrosis in any of the bodies of the vertebrae An exploratory incision was made high up in the neck, just behind the angle of the jaw, and the common carotid and its bifurcation exposed The *common* carotid was normal and the external carotid easily uncovered The internal carotid, as such could not be found Its position was occupied by an oval pulsating mass which began where the external carotid came off from the common carotid This mass was only slightly larger than the artery at first, but gradually became larger as it ascended into the neck. Compression on the common carotid was made, and with the finger in the pharynx, the pulsation disappeared, and compression caused the disappearance of the mass As soon as compression was removed from the artery, the pulsating mass immediately reappeared As consent had not been given for so serious an operative procedure as the ligation of the common carotid, the wound was closed, and the patient convalesced uneventfully The gravity of her condition was explained to her family and to herself, and ten days later, the carotid was again exposed and ligature applied This patient made an absolutely uneventful recovery None of the usual phenomena following ligature of the carotid appeared Great care was taken at the time not to injure the internal jugular vein, and especially not to injure the pneumogastric nerve There was no weakness in the opposite side of the body no paralysis of any kind, no disturbance of cerebration, and no evidence of pneumogastric injury The roaring immediately disappeared, pulsation in the mass ceased, and Jan 2, 1916, one year after ligation, the mass is still present, although slightly smaller, without pulsation, and symptoms of pressure cough, shortness of breath and difficulty in swallowing have largely disappeared

Aneurysms of the internal carotid artery are divided anatomically into intracranial and extracranial aneurysms Intracranial carotid aneurysms are reported with comparative frequency In 1,000 ligations of the common carotid, 113 were for pulsating exophthalmos Pulsating exophthalmos is usually caused by an arteriovenous aneurysm between the cavernous sinus and the internal carotid, and this condition is usually brought about by trauma to the skull

Extracranial internal carotid aneurysms are very rare Crisp mentions only two in a collection of 551 aneurysms In Matas'[6] collection of aneurysms treated after this method by American and foreign surgeons, there is not a single case of internal carotid aneurysm of the extracranial variety Herzen records it as occurring only once in his cases Monod and Vanverts in their collective cases mention one case in which restorative endo-aneurysmorrhaphy was attempted and failed because of secondary hemorrhage The most complete report is one by Bobbio,[7] who reports eighteen cases of aneurysm of the internal carotid which he had been able to find in the literature In these cases the common carotid was tied eleven times with five deaths It is fortunate that these aneurysms are rare, according to Matas, because when they do occur they are often mistaken for other conditions with fatal results Thus, in 11 extracranial aneurysms collected by Werner, only six were correctly diagnosed before treatment They are often mistaken for growths projecting into the pharynx, or for abscess near the pharynx Matas divides these aneurysms etiologically into three groups traumatic or false aneurysms, erosion aneurysms, and true arteriosclerotic aneurysms

The common carotid artery was first tied for aneurysm by Sir Astley Cooper in 1805 at Guy's Hospital, and the patient died on the nineteenth day The same surgeon repeated the operation in 1808 with success The common carotid had previously been tied for hemorrhage unsuccessfully by Mr Abernathy in 1795, and successfully by Mr Fleming in 1803 Since that time the common carotid has been tied repeatedly and the average mortality has been about 27 per cent One of the most remarkable reports showing the advantage of band over ligation was a case reported by Charles H Mayo[8] at the American Surgical Association in Washington in 1910 This patient was a woman, aged 56, who had an arteriovenous intracranial aneurysm, presumably of the internal carotid and cavernous sinus, with frightful head noises and exophthalmos She was operated on under local anesthesia, and a metal band made of a little clip of block tin was applied and tightened While the wound was being closed the patient said that the light was going out The wound was opened and the band loosened until vision returned Six months later the band was still in situ, and the patient was much improved These bands are soft enough to be compressed digitally and yet thick enough to remain closed without clips A long piece of metal with the end turned in the shape of an aneurysm needle is slipped around the artery and the handle part cut away This makes a very convenient method of handling the clip

Matas advises the following routine, although he has had no personal experience with aneurysms of the internal carotid First, the common carotid should be tied, or preferably partially obliterated by the Halsted band, and later on, completely closed If the aneurysm should relapse, extirpation might be attempted, but this would be an extremely hazardous undertaking, and hardly advisable A preferable procedure would be an obliterative endo-aneurysmorrhaphy, provided it were possible to secure the upper pole of the sac below the base of the skull In order to reach the sac, temporary resection of the lower jaw would have to be done In these cases endo-aneurysmorrhaphy should be limited to

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6 Matas in Keen s Surgery 1909 v
7 Bobbio Policlinico Rome February 1906
8 Mayo C H Tr Am Surg Assn 1910 p 52

internal suturing of the orifices of the sac and occlusion of the sac by packing The chief risk of total extirpation would be uncontrollable bleeding from the dilated internal jugular at this point, and destruction of the lower cranial nerves at their exit from the skull Most operators prefer ligation of the common carotid to ligation of the internal carotid in the treatment of these aneurysms, and in this case ligation of the internal carotid was not possible because the sac of the aneurysm began at the bifurcation The internal carotid was first ligated by Gurdon Buck of New York, reported in 1850, and in this connection it might be interesting to state what is already known to most of us, that the first ligature applied on the proximal side of an aneurysm was done by Dominique Anel, Jan 30, 1710, who ligated the brachial artery for aneurysm with recovery The most violent opposition was encountered, and as an example of the skill of detractors, they claimed, first, that it was not the brachial artery that was tied, secondly, that the ligature did not cure the aneurysm, and thirdly, that cure was by lucky chance only The old operation had been practiced in small aneurysms previous to this, which was to open the sac and ligate all bleeding points within the sac Morel attempted this operation in an aneurysm of the carotid i 1687, and lost his patient on the table from hemorrhage It was interesting to note in looking up the history of aneurysms that the femoral artery was not first tied for popliteal aneurysm by John Hunter, Dec 12, 1785, but that Desault had performed the same operation successfully January 22 of that year [9]

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THE CHARCOT-MARIE-TOOTH TYPE OF PROGRESSIVE NEUROMUSCULAR ATROPHY

WITH A REPORT OF TWO CASES *

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Charcot and Marie,[1] in a joint contribution in 1886, first described this type of atrophy, which they considered in the nature of a dystrophy Tooth[2] in England in the same year described it independently, practically giving this affection a similar summary In 1889, however, Hoffman discovered a neurotic atrophy in the peroneal nerves, which immediately removed the affection from the category of the dystrophies and placed it in the class of primary neural degenerations Since these notable contributions, American neurologists, notably Sachs[3] and Spiller,[4] have described cases confirming the clinical syndrome of this condition The literature on the subject, although not very voluminous, is apparently divided among American, English and French authors, with an occasional case reported by Italian observers German observers, in a number of reported cases, have a tendency to include this distinct neurologic condition among the spinal atrophies, which Mashanka[5] deprecates very much, as not in accord with a true conception of the pathology of the disease

Although textbooks and monographs dwell on the rarity of the affection, Mashanka refutes the idea that it is exceptional in occurrence He believes that it is a fairly common disease, and that a great many more cases would be found if our clinical acumen was somewhat sharpened Either his contentions are correct or the disease is rare in this country

No known cause has been formulated A number of observers state that their cases followed a febrile disturbance One of my cases followed such a course Gowers[6] would class this affection among the abiotrophies, that is, a tendency for nervous tissue to suffer early decay and death

The pathology of the disease was in a chaotic state following Charcot and Marie's monograph, as it was then thought to be a dystrophy, but Hoffman, Bernhardt, Siemerling, Sainton,[7] Dejerine and Armand-Delille, in necropsy material and from a study of the recorded cases, came to the conclusion that the lesions consisted of a degeneration of the muscles, nerves and posterior columns of the spinal cord, involving the sensory and motor sides of the nerves peripherally and centrally

Although the hereditary factor is commented on strongly by most authors, isolated cases have been described in which heredity played no role in the disease My cases lacked this distinguishing feature

Occurring in families in which the hereditary factor is strong, brothers and sisters are equally affected; but if we are to include isolated cases, we find that males are five times more susceptible than females

The extreme age limits of described cases are 2 and 39 years Most cases have had their onset between the tenth and twentieth year My cases commenced at 16 and 20 years, respectively

CLINICAL COURSE

The onset is slow, although in one of my cases it was rather rapid The patient may not appreciate the atrophy until function of the limbs is interfered with Most of the cases reported in the literature mention the legs as first affected, then after a variable time, lasting from several months to several years, the upper extremities become involved It also may remain permanently localized either to the upper or lower extremities, although this is unusual My cases, of three to six years' duration, respectively, have so far selected the lower extremities When involving the upper extremities, the thenar, hypothenar and interosseus muscle bundles first show atrophy, then follow the flexors and extensors In the lower extremities, the peroneal group and antero-external part of the foot first show atrophy and diminution in muscle volume

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[9] In addition to the references already given, the following will be found of interest
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* Patients presented before *the Harlem* Medical Society, March 1, 1916

* From the Hospital for Deformities and Joint Diseases, Service of Dr Henry W *Frauenthal*

[1] Charcot and Marie Rev de med, 1886

[2] Tooth Brain, x, *243*

[3] Sachs New York Med Jour, 1888

[4] Spiller *Osler s Modern* Medicine

[5] Mashanka *These contribution* a l'etude clinique de l amyotrophie Charcot Marie

[6] Gowers Text Book of Nervous Diseases

[7] Sainton, M Paul These de Paris, 1899

A distinguishing feature of this atrophy is its symmetry and its distal character The proximal portions of the limbs are well preserved and show their normal contour, in striking contrast to the wasted distal portions

As a result of the atrophy, the extensors give way, thus giving us various degrees of claw hand, foot drop and equinovarus deformities The atrophy and paralysis are absolutely parallel, which condition naturally influences the gait of the patient or the use of the hands In moderate grades of wasting, there is very little interference with function of the limbs, although the gait may readily show impairment, or the hands loss of power for finer movements In extreme grades of wasting total helplessness supervenes Bony atrophy is absent and constitutes a singular feature of the cases Face, chest and trunk muscles are normal, and remain unaffected throughout the course of the disease

Fibrillary contraction constitutes a persistent feature of the affection It exists only in atrophying muscles, and stops when they are completely wasted My cases did not show this markedly, but the extreme atrophy present in both cases readily explains its absence

The reflexes in most cases reported are abolished, although Mashanka insists that they are variable, either normal, diminished, lost or increased One of my cases showed normal patellar reflexes, while the other case showed them markedly exaggerated The last condition may indicate lateral tract involvement, as particularly emphasized by Spiller Ankle clonus has been described in one case The cremasteric abdominal and upper arm reflexes have been constantly reported as normal

Electrical reactions naturally depend on the grade of atrophy In extreme atrophy, there is no response either to faradism or galvanism My cases showed an almost insignificant response in both tibialis anticus muscles with the strongest galvanic current

The sensibility is not very much disturbed subjectively Forms of cramps and paresthesias have been described, but violent and continuous pain is not a feature of the disease In contrast to these accepted observations, one of my patients developed such severe pain in one leg that she applied for admission to a hospital where a diagnosis of osteomyelitis was made and an amputation performed below the knee A small tarsal bone was subsequently removed from the other foot, but without relief to the patient in her remaining leg Objective sensibility is not altered The muscular sense is intact, and hyperesthesia is rare Vasomotor disturbances are, however, a marked feature The limbs are cold, cyanotic and erythematous, and at times show violaceous patches One of my cases showed this in striking fashion

Sphincteric troubles are absent, and evidently do not belong to this malady Organs of sense are intact and show no special disturbances The psychic state is good and the general health is remarkably well preserved The evolution of the disease is so slow and encompasses so long a period that it is quite compatible with long life and preservation of function An intercurrent illness usually closes the scene

CASE REPORTS

Case 1—E C, woman, aged 26, Russian, is the sixth child in a family of ten, seven sisters and brothers are dead of various causes The parents are living and well Two brothers are in good health There are no similar conditions in any member of the family The patient had the usual infantile disturbances, but is quite sure that she never had any acute or serious illness She is under the impression that her legs have always been thin, but she was able to use them with perfect freedom up to the age of 20, when she commenced to suffer a good deal of pain in both feet This was followed by gradually increasing weakness in both legs The patient at about this time observed the atrophy, which progressed gradually for about five years, then suddenly stopped, and for the past year has been practically stationary The pain in both feet persisted from the onset of the malady, so much, in fact, that it became quite unbearable, necessitating her admission to a hospital in this city A diagnosis of osteomyelitis (?) was made and an amputation below the knee performed on the left leg The pain persisting in the other leg, a small tarsal bone was next removed These operative procedures did not improve her condition, and at present she gets about fairly well with an artificial limb and brace

The general physical and laboratory examinations are uniformly negative The upper extremities show no abnormalities, either on inspection or with regard to function The right leg and foot below the knee joint reveal an extreme atrophy which contrasts strangely with the well preserved contour of the thigh This emphasizes the distal character of the atrophy and the preservation of the proximal part of the limb There are no objective sensory disturbances elicited The limb has a marked cyanotic hue and is covered with irregular violaceous patches Foot drop and equinovarus are present and quite evident on account of extreme shrinking of the foot In fact, it is extremely difficult, except by a liberal stretch of the imagination, to associate this small atrophic infantile foot with an adult The reflexes are present on both sides and equally exaggerated, the response in the stump of the amputated leg appearing as a grotesque and startling phenomenon Under extreme galvanic stimulation we get an insignificant response in the tibialis anticus All other muscles fail to respond with the strongest currents Muscle fibrillation is absent The patient s general health is excellent She manages to get about fairly well, and is in no way depressed in spite of her distressing condition

Case 2—J B, man, aged 19, loom fixer by occupation, had the usual diseases of childhood He has never had any acute illness except that in connection with his present affection His habits are good He does not drink, and is a moderate user of tobacco All venereal infection is denied. The family history has no bearing on the patient's present complaint, nor are there any other members of the family similarly affected The patient, as heretofore noted, was perfectly well up to the age of 16 when he had a febrile illness of unknown etiology and classification lasting three days He recovered quickly and seemed quite well for two months, when the present trouble commenced This manifested itself by an inability to walk properly There was loss of power in both legs and feet which progressively became worse for one year, then the condition remained stationary and has remained so ever since, that is, for a period of two years At no time were there any bladder, rectal or sensory disturbances

The general physical examination reveals no abnormalities, and the laboratory tests are uniformly negative The upper extremities show no involvement Examination of the legs shows an evident atrophy which has involved both feet Here we also note the distal character of the atrophy, the proximal portions of the limbs, that is, the thighs, are not involved and show a normal fleshy contour There are absolutely no sensory disturbances to be elicited, either subjectively or objectively A double foot drop is quite evident, and the gait, which is quite good, is suggestive of a 'steppage ' There is marked vasomotor disturbance, mottled areas of erythema and cyanosis being present in both limbs The patellar and Achilles reflexes are normal on both sides and there is an equal response With the strongest galvanic stimulation, a very feeble wormlike" response is elicited in the tibialis anticus of both sides, all other muscles fail to respond with the strongest faradic or galvanic stimulation The general health is excellent and the mental state has always been good

CONCLUSION

It is hoped that this study will stimulate workers in the field of neurology to recognize and isolate these neural disturbances as belonging to a distinct clinical entity and not to class them with the dystrophies with which they are often confounded[8]

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STREPTOTHRIX IN BRONCHOPNEUMONIA OF RATS SIMILAR TO THAT IN RAT-BITE FEVER

A PRELIMINARY REPORT *

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Bronchopneumonia is frequent in the white rat, and occurs also in the gray rat In the course of a study of this condition, especially as it occurs in the white rat, a streptothrix was found which may be of interest in connection with rat-bite fever in man

Sixty white rats showing acute or chronic bronchopneumonia have been examined A long, fine, straight or wavy filamentous organism was observed in smear preparations or by dark field illumination in fifty-six Three lesions in which no organisms were seen were chronic The organisms are most abundant in acute lesions It is a gram-negative organism and stains fairly distinctly with carbol-gentian-violet and the Giemsa stain It is distinguished from cilia by its greater length, more pointed ends and its occasional wavy form In the dark field I have observed once or twice a slow wormlike motion, and one organism showed a corkscrew motion They are barely visible in the tissues stained with methylene blue, but are distinct in tissues impregnated with silver nitrate according to Levaditi's method Here, they appear more wavy and more fragmented than in other preparations These organisms were not observed in twenty-four normal rats

A streptothrix resembling these organisms was cultivated from twenty rats, and isolated in pure culture thirteen times Cultures from thirty-three rats remained sterile Why successful cultures were obtained from some rats and not from others is undetermined The character of the lesion does not seem to make any difference Successful cultures were more frequent in the case of sick rats and from lesions in which other bacteria were present The other organisms isolated from twenty-two rats were *Streptococcus viridans* and *pyogenes*, pneumococcus, staphylococcus, diphtheroid bacilli, anaerobic spirilla, and a profusely growing gram-negative bacillus which was probably a contamination Seven of these were isolated from cultures in which the streptothrix did not grow Successful cultures were grown on human blood agar or ascites-goat-blood-agar The various mediums for growing spirochetes were used, but no spirochetes were cultivated This streptothrix is a faculative anaerobe, growing best at 37 C (98 6 F) Slight growth appears at room temperature after several days' incubation Growth generally appears in from forty-eight to seventy-two hours as discrete, colorless or grayish pin-point colonies At first they appear dull, but later become glistening and increase slightly in size The medium is not changed The growth in the fluid of condensation and in ascites broth is white and flocculent, the medium remaining clear The growth on Loeffler's blood serum is similar to the growth on blood agar, but does not always occur There is no growth on plain and dextrose agar, ascites dextrose agar, in plain and dextrose broth or in milk

In cultures the organism is slender, branching, straight or wavy, filamentous, varying greatly in length and showing bacillus and coccuslike forms True branching is seen in young cultures, but is not especially frequent They often show spindle or irregular shaped swellings Twisted and wavy forms are more frequent on solid mediums than in ascites broth, where they appear generally as long threads or chains of bacilli They do not show a radial arrangement at the periphery of the colony They stain with ordinary stains They are gram-negative, except the swellings, and are not acid fast The organism here is nonmotile

An increase in opsonins and agglutinins for this organism has been observed in infected rats

Young healthy rats injected intraperitoneally with cultures show acute lesions in the lungs The organism has been isolated in pure culture from the heart's blood and lung

This streptothrix appears to be the same as *Streptothrix muris ratti* isolated in pure culture from the blood of patients with rat-bite fever by Schottmuller[1] and Blake,[2] and seen in the blood during the paroxysms by Tileston[3] Futaki[4] and his associates describe a motile spirochete in the skin and lymph node of two cases of rat-bite fever, but details of experiments and cultures are not available Some of the spiral forms in my Levaditi specimens closely resemble the spirochetes shown in their drawing Rats causing rat-bite fever have not been examined as far as known I have examined twenty-eight wild rats, and found one infected The lesions in the lung were the same as those observed in the white rats, and showed the same organism As the trachea of infected rats is full of mucus containing large numbers of the organisms, it is readily seen that a bite from such a rat might be infectious

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[8] In addition to the references already given, the following will be found of interest
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[1] Schottmuller Dermat Wchnschr, 1914, lviii, Suppl, p 77

[2] Blake Jour Exper Med, 1916, xxiii, 39

[3] Tileston, Wilder The Etiology and Treatment of Rat Bite Fever, The Journal A M A, April 1, 1916, p 995

[4] Futaki Jour Exper Med, 1916, xxiii, 249

Tuberculosis in Madrid—On the basis of a census of all known cases of tuberculosis in Madrid during the last four years, according to the *Siglo Medico*, Dr Codina, at a recent meeting of the Academia de Medicina, stated that of the 1,300 streets in the city, over 79 per cent had had one or more cases of tuberculosis, and over 26 per cent of the houses sheltered tuberculous inmates on a given day, and over 60 per cent had had one or more tuberculous inmates in the course of the four years That is, over three fifths of the houses of Madrid have sheltered tuberculosis in the last few years, and there are fifty-two houses that have each had from eleven to thirty-one cases He stated further that 92 69 per cent of the tuberculous have less than a peseta —20 cents—a day to live on, 7 11 per cent have from 1 to 2 pesetas, and only 0 2 per cent as much as from 2 to 4 pesetas Overcrowding and illiteracy are shown anew to be potent factors in tuberculosis, only 35 14 per cent of the tuberculous in Madrid can read

THE BACILLUS EPILEPTICUS [*]

THIRD REPORT

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In 1914 I affirmed[1] that constipation was a factor, and a very essential factor, in the causation of epilepsy I have found that constipation, always present in the patients who came to me, was caused by mechanical disturbance or distortion of the intestines, and that when these conditions of the intestines were corrected by surgical means, the patients in a large number of instances were cured without other treatment, not only of their constipation, but very often of their epilepsy

My increasing experience has confirmed the correctness of these views with respect to both the causation and the treatment of the disease I was aware from the start, however, that, while the connection between constipation as the cause and epilepsy as the effect was obvious from the history of the cases there had been given no adequate explanation or actual demonstration of the connecting link between the two conditions

While this was true, a careful study of the symptomatology, as manifested in my cases, had early convinced me that this connecting link consisted in some form of infection

Was the infection, however, restricted, as it seemed, to the intestinal canal? Were the bacteria in the intestines responsible for the evolution of toxins which, when absorbed, caused epilepsy? Were the ordinarily known organisms of the intestinal flora responsible for such toxins, or were the toxins elaborated by some special organism? Or was the offending organism, whether of the known flora or not, absorbed directly into the blood? And, after all, was the constipation which was present in all of my cases responsible for the enforced absorption, toxic or bacterial or both, into the circulation?

It was convictions such as I have expressed and questions such as I have just propounded that induced me to inaugurate investigations which have resulted in the isolation, cultivation and experimental study of an organism which, it would seem, according to the law of Koch, has a causal relation to epilepsy I feel that it is important to place findings, as far as they have gone, and conclusions, as far as they have been reached, before the profession, that they may at least serve as the basis of further investigations, especially by those with large clinical and laboratory facilities at their disposal

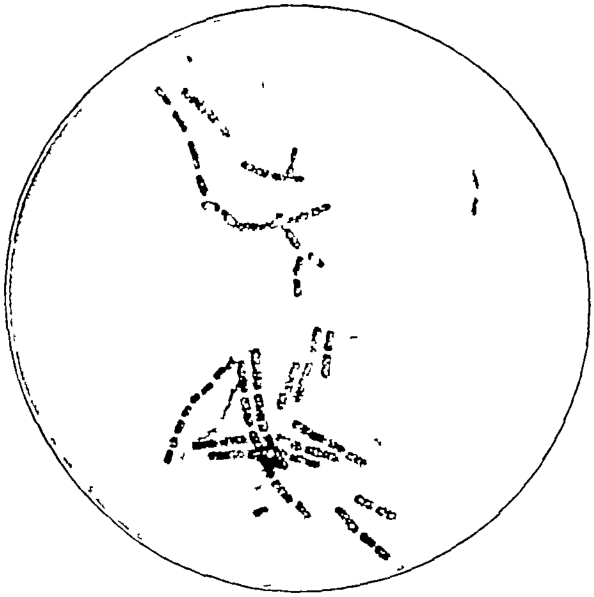

Fig 1 —Bacillus epilepticus from the blood of an epileptic patient (a) the isolated organism in the right upper quadrant is an early growth (b) the remainder of the field is occupied chiefly with mature culture from agar agar slant

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The investigations, begun clinically by myself, were further developed by placing Dr E P Hyatt in charge of the hematologic work of my laboratory Investigations were made in the laboratory, in the hospitals with which I am connected, and in the Nursing Home for Epileptics All patients were kept under strict observation The experimental work was done at the last named institution, where the animals were kept under constant surveillance All my patients afflicted with constipation, whether epileptics or not, on application at the office, were thoroughly examined, special attention being directed to Roentgen examination of the abdominal viscera, repeated analyses of the urine, and careful bacteriologic and other analytic examination of the blood The blood was taken from a vein in the forearm under the usual aseptic precautions, from 1 to 2 5 c c being the amount ordinarily taken This blood was examined on admission by direct smears and, later by cultures It was soon noticed that there was an organism, always the same organism, present in blood of epileptics, but that it was never present in the blood of nonepileptics It was sometimes, although rarely, found in the direct smears, but the cultures showed that it was present in a majority of cases Examination was also made of the contents of each colon that I removed The contents of each vermiform appendix were similarly examined, as were the enlarged and indurated lymphatics of the mesocecum and the mesocolon These glands were either removed with the large bowel or taken out in the course of some other operation and submitted to special examination The result was that the organism which was being found so uniformly in the blood at the time of preliminary examination was found with equal uniformity in the contents of the cecum, in that of the appendix, and also in the lymphatic glands of the same patient at the time of operation Similar investigations in nonepileptics were always negative It was concluded, therefore, that the cecum of epileptics was the very constant habitat of the organism, that the lymph channels were the highways of its transit, and that the blood was its final destination It was also noted in each of these cases that the cecum was very large, flabby and mobile, and that its dilatation with resulting attenuation of its walls was obviously the effect of stasis induced by retardative conditions further along

These observations compelled the further conclusion that mechanical conditions of the intestines, more especially of the cecum, forced the absorption of the organisms, and that such absorption would not occur in the same degree, if at all, if these retardative conditions did not exist — a conclusion which is amply confirmed by both clinical observation and postoperative results

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[*] Read before the Medical Research Society of Cincinnati April 6 1916

[1] Reed C A L. Constipation and Epilepsy, Lancet Clinic July 25 1914 The Probable Cause and Logical Treatment of Epilepsy The Journal A M A, March 27 1915 p 1047

CONCLUSION

It is hoped that this study will stimulate workers in the field of neurology to recognize and isolate these neural disturbances as belonging to a distinct clinical entity and not to class them with the dystrophies with which they are often confounded[8]

247 West One Hundred and Thirty-Fifth Street

STREPTOTHRIX IN BRONCHOPNEUMONIA OF RATS SIMILAR TO THAT IN RAT-BITE FEVER

A PRELIMINARY REPORT [*]

RUTH TUNNICLIFF, M D
CHICAGO

Bronchopneumonia is frequent in the white rat, and occurs also in the gray rat In the course of a study of this condition, especially as it occurs in the white rat, a streptothrix was found which may be of interest in connection with rat-bite fever in man

Sixty white rats showing acute or chronic bronchopneumonia have been examined A long, fine, straight or wavy filamentous organism was observed in smear preparations or by dark field illumination in fifty-six Three lesions in which no organisms were seen were chronic The organisms are most abundant in acute lesions It is a gram-negative organism and stains fairly distinctly with carbol-gentian-violet and the Giemsa stain It is distinguished from cilia by its greater length, more pointed ends and its occasional wavy form In the dark field I have observed once or twice a slow wormlike motion, and one organism showed a corkscrew motion They are barely visible in the tissues stained with methylene blue, but are distinct in tissues impregnated with silver nitrate according to Levaditi's method Here, they appear more wavy and more fragmented than in other preparations These organisms were not observed in twenty-four normal rats

A streptothrix resembling these organisms was cultivated from twenty rats, and isolated in pure culture thirteen times Cultures from thirty-three rats remained sterile Why successful cultures were obtained from some rats and not from others is undetermined The character of the lesion does not seem to make any difference Successful cultures were more frequent in the case of sick rats and from lesions in which other bacteria were present The other organisms isolated from twenty-two rats were *Streptococcus viridans* and *pyogenes*, pneumococcus, staphylococcus, diphtheroid bacilli, anaerobic spirilla, and a profusely growing gram-negative bacillus which was probably a contamination Seven of these were isolated from cultures in which the streptothrix did not grow Successful cultures were grown on human blood agar or ascites-goat-blood-agar The various mediums for growing spirochetes were used, but no spirochetes were cultivated This streptothrix is a faculative anaerobe, growing best at 37 C (98 6 F) Slight growth appears at room temperature after several days' incubation Growth generally appears in from forty-eight to seventy-two hours as discrete, colorless or grayish pin-point colonies At first they appear dull, but later become glistening and increase slightly in size The medium is not changed The growth in the fluid of condensation and in ascites broth is white and flocculent, the medium remaining clear The growth on Loeffler's blood serum is similar to the growth on blood agar, but does not always occur There is no growth on plain and dextrose agar, ascites dextrose agar, in plain and dextrose broth or in milk

In cultures the organism is slender, branching, straight or wavy, filamentous, varying greatly in length and showing bacillus and coccuslike forms True branching is seen in young cultures, but is not especially frequent They often show spindle or irregular shaped swellings Twisted and wavy forms are more frequent on solid mediums than in ascites broth, where they appear generally as long threads or chains of bacilli They do not show a radial arrangement at the periphery of the colony They stain with ordinary stains They are gram-negative, except the swellings, and are not acid fast The organism here is nonmotile

An increase in opsonins and agglutinins for this organism has been observed in infected rats

Young healthy rats injected intraperitoneally with cultures show acute lesions in the lungs The organism has been isolated in pure culture from the heart's blood and lung

This streptothrix appears to be the same as *Streptothrix muris ratti* isolated in pure culture from the blood of patients with rat-bite fever by Schottmuller[1] and Blake,[2] and seen in the blood during the paroxysms by Tileston[3] Futaki[4] and his associates describe a motile spirochete in the skin and lymph node of two cases of rat-bite fever, but details of experiments and cultures are not available Some of the spiral forms in my Levaditi specimens closely resemble the spirochetes shown in their drawing Rats causing rat-bite fever have not been examined as far as known I have examined twenty-eight wild rats, and found one infected The lesions in the lung were the same as those observed in the white rats, and showed the same organism As the trachea of infected rats is full of mucus containing large numbers of the organisms, it is readily seen that a bite from such a rat might be infectious

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[8] In addition to the references already given, the following will be found of interest
Pediatria, Naples, 1912, xx, 133
Ponticaccia Riv ven d sc med, 1912
Souques Icon de la Salpetriere, 1914, xxvii, 175
Jour Nerv and Ment Dis, 1915, p 570
Virchows Arch f path Anat, cxxxii, 259
Arch f Psychiatrie, xx[illegible], 105

[*] From the Memorial Institute for Infectious Diseases

[1] Schottmüller Dermat Wchnschr 1914, lviii, Suppl, p 77

[2] Blake Jour Exper Med, 1916, xxiii, 39

[3] Tileston, Wilder The Etiology and Treatment of Rat Bite Fever, The Journal A M A, April 1, 1916, p 995

[4] Futaki Jour Exper Med, 1916, xxiii, 249

Tuberculosis in Madrid—On the basis of a census of all known cases of tuberculosis in Madrid during the last four years, according to the *Siglo Medico*, Dr Codina, at a recent meeting of the Academia de Medicina, stated that of the 1,300 streets in the city, over 79 per cent had had one or more cases of tuberculosis, and over 26 per cent of the houses sheltered tuberculous inmates on a given day, and over 60 per cent had had one or more tuberculous inmates in the course of the four years That is, over three fifths of the houses of Madrid have sheltered tuberculosis in the last few years, and there are fifty-two houses that have each had from eleven to thirty-one cases He stated further that 92 69 per cent of the tuberculous have less than a peseta —20 cents—a day to live on, 7 11 per cent have from 1 to 2 pesetas, and only 0 2 per cent as much as from 2 to 4 pesetas Overcrowding and illiteracy are shown anew to be potent factors in tuberculosis, only 35 14 per cent of the tuberculous in Madrid can read

THE BACILLUS EPILEPTICUS*

THIRD REPORT

CHARLES A L REED, M D
CINCINNATI

In 1914 I affirmed[1] that constipation was a factor, and a very essential factor, in the causation of epilepsy I have found that constipation, always present in the patients who came to me, was caused by mechanical disturbance or distortion of the intestines, and that when these conditions of the intestines were corrected by surgical means, the patients in a large number of instances were cured without other treatment not only of their constipation, but very often of their epilepsy

My increasing experience has confirmed the correctness of these views with respect to both the causation and the treatment of the disease I was aware from the start, however, that, while the connection between constipation as the cause and epilepsy as the effect was obvious from the history of the cases there had been given no adequate explanation or actual demonstration of the connecting link between the two conditions

While this was true, a careful study of the symptomatology, as manifested in my cases, had early convinced me that this connecting link consisted in some form of infection

Was the infection, however, restricted, as it seemed, to the intestinal canal? Were the bacteria in the intestines responsible for the evolution of toxins which, when absorbed, caused epilepsy? Were the ordinarily known organisms of the intestinal flora responsible for such toxins, or were the toxins elaborated by some special organism? Or was the offending organism, whether of the known flora or not, absorbed directly into the blood? And, after all, was the constipation which was present in all of my cases responsible for the enforced absorption, toxic or bacterial or both, into the circulation?

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METHODS OF INVESTIGATION

The investigations, begun clinically by myself, were further developed by placing Dr E P Hyatt in charge of the hematologic work of my laboratory Investigations were made in the laboratory, in the hospitals with which I am connected, and in the Nursing Home for Epileptics All patients were kept under strict observation The experimental work was done at the last named institution, where the animals were kept under constant surveillance All my patients afflicted with constipation, whether epileptics or not, on application at the office, were thoroughly examined, special attention being directed to Roentgen examination of the abdominal viscera repeated analyses of the urine, and careful bacteriologic and other analytic examination of the blood The blood was taken from a vein in the forearm under the usual aseptic precautions, from 1 to 2 5 c c being the amount ordinarily taken This blood was examined on admission by direct smears and, later by cultures It was soon noticed that there was an organism, always the same organism, present in blood of epileptics, but that it was never present in the blood of nonepileptics It was sometimes, although rarely, found in the direct smears, but the cultures showed that it was present in a majority of cases Examination was also made of the contents of each colon that I removed The contents of each vermiform appendix were similarly examined, as were the enlarged and indurated lymphatics of the mesocecum and the mesocolon These glands were either removed with the large bowel or taken out in the course of some other operation and submitted to special examination The result was that the organism which was being found so uniformly in the blood at the time of preliminary examination was found with equal uniformity in the contents of the cecum, in that of the appendix, and also in the lymphatic glands of the same patient at the time of operation Similar investigations in nonepileptics were always negative It was concluded, therefore, that the cecum of epileptics was the very constant habitat of the organism, that the lymph channels were the highways of its transit, and that the blood
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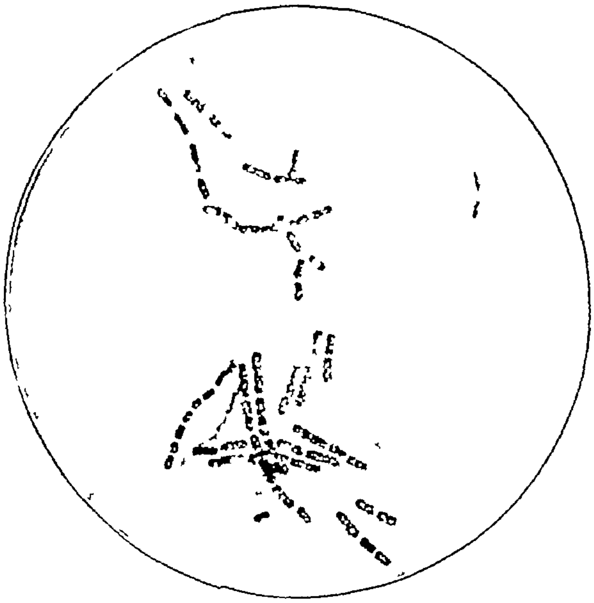

Fig 1 —Bacillus epilepticus from the blood of an epileptic patient (*a*) the isolated organism in the right upper quadrant is an early growth (*b*) the remainder of the field is occupied chiefly with mature culture from agar agar slant

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* Read before the Medical Research Society of Cincinnati, April 6, 1916

[1] Reed C A L Constipation and Epilepsy Lancet Clinic, July 25 1914, The Probable Cause and Logical Treatment of Epilepsy, The Journal A M A, March 27 1915 p 1047

THE BACILLUS EPILEPTICUS A SPORE-BEARING ORGANISM

A further study of the organism shows that it stains best with carbolfuchsin Methyl blue may be employed Gram's method also may be used, although it is less satisfactory than the others These stains, when positive, reveal the organism It is better, however, for reasons which shall become apparent, to stain at the same time for both the organism and for spores For this purpose, Abbott's method is usually employed which, when positive, shows the organisms red and the spores blue The result, however, so far as the direct smears are concerned, is usually negative The occasional very positive findings and the desirability of having the early and conclusive information thus afforded, however, make it important always thus to examine the fresh blood

Cultures are then made in either agar-agar or bouillon, although the organism will grow in other mediums Incubation progresses most favorably at from 37 to 40 C (98 6 to 104 F) The growth is, however, more *prompt at the latter temperature* The growths begin to manifest themselves from the second to the fifth day, and first show their pres- by marked turbidity of um A smear made oon as this turbidity me marked, shows a few organisms which may be recognized as short thick bacilli with blunt ends (Fig 1 *a*) They are actively motile The organism continues to grow, and when mature is very large, so large, indeed, that both from its size and other morphologic features, it is suggestive of a saprophyte which might easily be derived from nonsterile mediums (Fig 1 *b*) This appearance was at first so impressive that it was accepted as conclusive, and our positive cultures were abandoned as probable contaminations Our error, however, was fortunately detected when both the *organism and its spores were repeatedly detected in direct smears* The sporulation becomes marked relatively to the age of the culture It is first manifested by the appearance of a light area in the

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preceding or at the moment of the seizures, although they may be secured at other times They are less readily found in long interval cases It follows, therefore, that the investigations are most readily conducted in institutions where the patients are under entire control

EXPERIMENTAL STUDY OF THE ORGANISM

Experimental study of this organism has been made on rabbits by (*a*) intravenous inoculation, (*b*) intraperitoneal injection, and (*c*) administration by the alimentary canal

Intravenous inoculation was practiced by injection into a rabbit through the marginal vein of one ear A growth from an agar slant was suspended in 8 c c of physiologic salt solution Of this suspension 2 c c were injected at one time, followed at twenty-four hour intervals by from 1 to 1 5 c c similarly administered On the second day, the rabbit was observed to act peculiarly, as if confused The next day, it had a recognizable convulsion, followed by stupor After this the convulsions were more frequent These would come on suddenly The animal would fall on its side, in a state of unconsciousness As it fell, it would emit a peculiar sound described by one of the watchers as a "half cry, half choking sound" During the period of unconsciousness, which was complete, there was staring of the eyes, the head turned to one side, the muscles of the neck twitched, and there were alternate contraction and extension of all four of the legs and feet This would last from three to five minutes, after which the rabbit would lie in a stupor for from fifteen to twenty minutes Early in the course of the convulsions, the animal would appear normal in the interval between the last stupor and the next seizure On the fourth day, a direct smear revealed the organism present in the blood (Fig 3), while a hanging drop showed that it was highly motile On the fifth day, however, the seizures became coalescent and the rabbit died in status epilepticus Several repetitions of this experiment showed that the phenomena induced were essentially uniform in all cases, the variation in the time of the first onset and in intensity being relative to the magnitude of the dose and the frequency of its repetition In certain instances in which small but repeated doses were given the convulsions did not appear for fourteen days or even longer

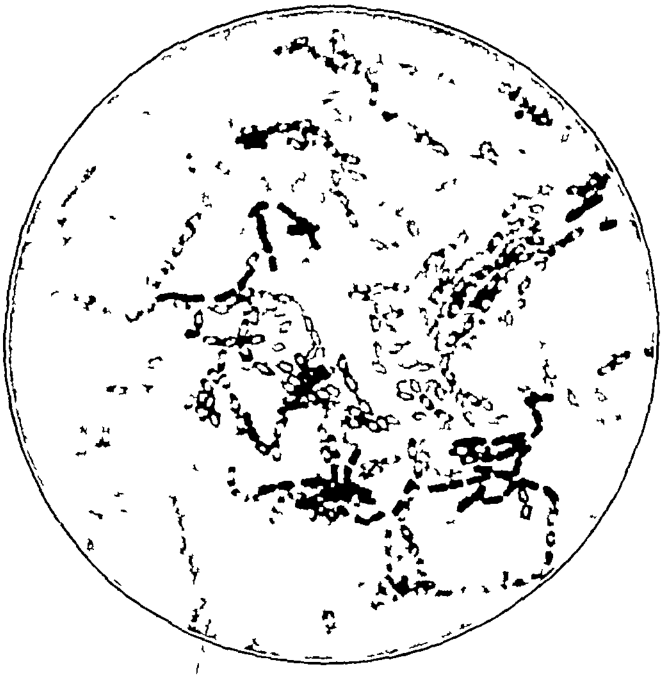

Fig 2 —Bacillus epilepticus from human subject, old culture from agar slant, showing excessive spore formation

Intraperitoneal injection was practiced to determine the toxicity of the cultures This was done by injecting the peritoneal cavity of a large rabbit with about 8 c c of the suspension similar to that previously described The animal almost at once became restless and moved about the cage constantly In an hour, it became drowsy and lay quietly down on its side, unable to move It died in this condition at the end of seven hours Necropsy revealed absence of fluid from the peritoneum, which was not in the least inflamed No organisms were found in the blood Death was therefore obviously due to simple absorption of toxins This observation was subsequently confirmed by several repetitions

Administration by the alimentary canal came about first quite accidentally A rabbit which had had some of the bacillary suspension injected into the vein of the ear was put back into the cage with a rabbit which had had no such treatment The inoculated rabbit speedily developed convulsions from which in due course it died In the meantime, the other rabbit, the one which had not been injected, developed convulsions The organism was found in the blood of this rabbit After a period of about ten days, it, too, died in continuous convulsions In accounting for the development of epilepsy in the second rabbit, it was remembered that it had licked the blood from the ear of its mate after the latter had been returned to the cage This blood was the slight reflux from the vein and, of course, brought out with it some of the organisms, which in turn were carried into the alimentary canal of the second rabbit This observation was an obvious demonstration that the organism reached the blood through the alimentary canal It was further confirmed by the fact that rabbits developed epilepsy when confined in cages which were purposely kept foul with the fecal discharges of animals in which the alimentary canal had been infected with the organism The animals which thus contracted the disease had taken food which had come in contact with the infected discharges We have had no evidence of the hematogenous infection of the intestines in animals which had been subjected only to intravenous inoculation

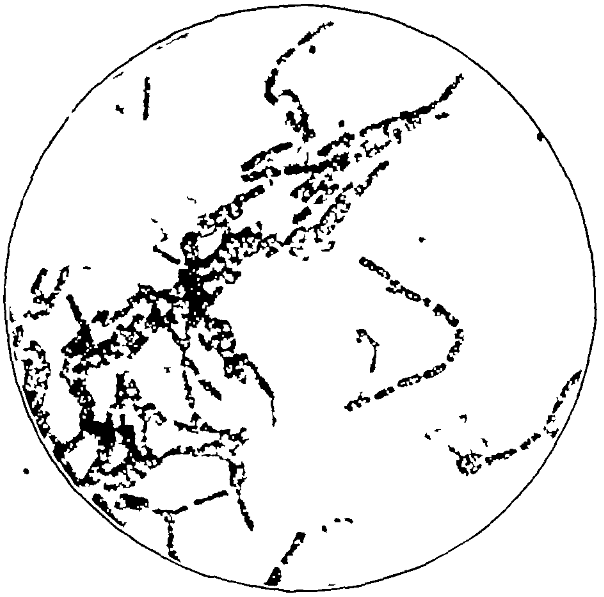

Fig 3 —Bacillus epilepticus from blood of rabbit six days after intravenous inoculation An early growth is here seen isolated in the left upper quadrant

THE BACILLUS EPILEPTICUS AND NATURAL IMMUNITY

In one particular rabbit in which a twenty-four hour growth from an agar-agar slant had been intravenously injected as before described, convulsions typically epileptic soon developed These increased in frequency and severity for the next two weeks The organism was demonstrated in the blood A little later, the seizures began to define a decrescendo in both frequency and severity into what seemed to be definite attacks of petit mal The last of these occurred just a month after the beginning of the experiment Since then the animal has had no sign of the disease Repeated examinations have failed to show the organism in the blood This spontaneous recovery has been observed in several other rabbits

This demonstrated triumph of natural immunity over the organism in rabbits throws an illuminating ray on similar results following operation in many of my cases To understand this fact, it is important, however, first to remember that in these instances of natural immunization in rabbits, the initial and only infection was effected by intravenous injection In other words, there was no focus like a large flabby and infected cecum to act as a fountain head for continued systemic invasion As a result, when the natural immunizing power of the animal had once prevailed over the invaders, the war was over There were no fresh reserves to take the place of the vanquished, and recovery resulted The probabilities are that if a preliminary focus had been established in the alimentary canal of these animals, the result would have been different As a matter of fact, all animals infected through the alimentary canal have died of epileptic seizures This principle is further illustrated in the postoperative records of certain of my cases in which, following surgical restoration of the normal fecal current and without other treatment, there was a continuance of the convulsions for some time Then the seizures began to grow lighter and fewer until there was a complete transition from the grand mal to the petit mal type Then, after a time, these ceased to occur In several of these cases, there has been no return of the seizures, their apparent cure varying from several months to as much as four years, in one case for twenty-one years

METHOD OF INVASION OF THE HUMAN SYSTEM

The facts already given would seem to be suggestive if not conclusive as to the infection of the general system through that gateway These conclusions, it would seem, are further confirmed by direct observation in many human subjects Thus it needs to be here restated that, in cases in which the blood had proved positive as to the presence of the *Bacillus epilepticus,* the same organism has been found in the cecum and in the enlarged and indurated lymphatics of the mesocecum In cases treated by appendicostomy or cecostomy, the organism is readily demonstrated in the cecal drainage until after the bowel has been successfully subjected to postoperative bactericidal treatment In cases in which the vermiform appendix has been removed at previous operation, the organism has been demonstrated in the cecum In cases in which I have removed a part of the vermiform appendix in the course of an appendicostomy, the organism has been demonstrated in the interior of the removed segment These observations, of course, are further confirmed by both the clinical phenomena and pathologic conditions uniformly found in so-called "idiopathic" epileptics[2] Thus the relationship between constipation and epilepsy would seem further to confirm the fact of a primary cecal focus under circumstances of stasis which naturally favors the more rapid multiplication of the organisms The ptotic or other retardative condition with resulting back pressure, always present in some form in these cases, mechanically enforces the absorption not only of toxins evolved by the organisms, but also of the organisms themselves These facts, associated with the additional fact that we have not so far found the organism about the tonsils or the teeth, would seem to indicate that the alimentary canal is at least the chief, if not the exclusive, atrium for the invasion of the system The final answer on this point ought, however, to be based on a much wider range of observation

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[2] Reed, C A L Diagnostic Methods and Pathologic Constants in Idiopathic Epilepsy, The Journal A M A Jan 29 1916 p 336

COMMUNICABILITY

The mere fact that one rabbit developed epilepsy by licking epileptic germs from the ear of another rabbit, and that other rabbits developed the disease by eating food that had become contaminated by contact with fecal discharges from epileptic rabbits, at once provokes thought as to the possible communicability of the disease from one human being to another This possibility becomes the more impressive in view of two cases now under my observation Both patients are physicians One, a vigorous man of about 35, who had never been seriously ill, not only attended but assisted in the nursing of an epileptic on whom I had done an ileosigmoidostomy, and in whom there was speedy development of paralytic ileus In an effort to secure action from the bowel, the physician himself administered several enemas About five months later, this physician himself fell in an epileptic seizure, and has since had three other grand mal attacks Another physician, aged a little over 50, at this time in the hospital following operation at my hands, has had epileptic seizures of gradually increasing severity for the last twelve years He recalls that several months before his initial attack, he personally administered an enema or several of them in a case of status epilepticus His blood, cecum, vermiform appendix and retrocecal lymphatics were all positive as to *Bacillus epilepticus* at the time of operation In neither of these cases could there be anything more than a presumption based on circumstantial evidence, that, through some accidental means — possibly the hands of the victims themselves — the organism had been carried from the alimentary canal of the patient to that of the attendant The fact, however, that the records of institutions for epileptics show that a very large proportion of the cases come from the insanitary abodes of vice, poverty and other evidences of degeneracy, in short, from environments in which personal hygiene is at its lowest ebb, is suggestive of contamination rather than of inheritance It must be conceded that while the evidence so far accumulated is largely circumstantial and inconclusive, additional significance is given to it by the character of the organism itself The fact that it is a spore-bearing bacillus, and that the spores are among the most resistant yet discovered, adds to the obvious danger In a nonnutritive wet medium, they have survived under observation for quite four months without evidence of diminished vitality No observation has been made as to their survival in either a dry or moderately moist environment In view of the fact that the organism demonstrably reaches the soil through fecal discharges, and in view of the fact that its spores are highly resistant and that they can and do survive for long periods, there is strong probability that the soil may be recognized as its extracorporeal habitat This probability is increased by the fact that, morphologically, the nearest analogue of the spore-bearing bacillus of epilepsy is the equally spore-bearing bacillus of tetanus, and that the primary habitat of the latter has been demonstrated to be the soil The fact that a larger number of people have epilepsy than have tetanus is another fact suggestive of the relatively greater dissemination of the cause In view of all these facts, it may be well to take due precaution against communication until further investigation can confirm or disprove their apparent significance

PATHOGENICITY

I know no better way to outline the pathogenic effects of this organism on the human system than by quoting from my Los Angeles address of Feb 18, 1915, several months before we had succeeded in isolating the bacillus I then said [3]

> The most important conclusion that has been forced upon me by my clinical observation is that the role of constipation, as a causative factor in epilepsy, is due to the more than probable fact that the really *initial cause is to be found in a specific infection.* I am so convinced of the accuracy of this conclusion that, in the absence of actual identification of the micro-organism, not only its existence, but many of its characteristics may be predicated upon its clinical manifestations Thus it may be safely assumed that this organism, probably a bacillus, belongs to the gas-forming series Its habitat is the alimentary canal, probably originally the duodenum, but in all instances, finally, the colon It is, furthermore, obviously toxogenic From its general habitat in the intestinal mucosa, the infection may travel in either or both of two directions, namely, outward with the intestinal juice, the succus entericus, and if not promptly carried away in the alvine current, must be taken up again in the process of absorption, and in this way become an additional element in systematic contamination

In further discussion of this then hypothetic organism and its toxins, I added that they, one or both,

> *have the faculty of accumulating in the tissues and in the circulatory media* Once within the blood current, they display a selective affinity for the sensory and motor centers It is, furthermore, obvious that their effects upon these centers are relative to the size of the accumulated dose and the tolerance of the individual When the accumulation goes beyond the point of tolerance, we may have, first, a flash of unconsciousness with a minimum of muscular disturbance, or none at all (petit mal), or second, sudden and profound loss of consciousness, with violent convulsive disturbance (grand mal), or third, persistent and almost coalescent seizures of the latter variety (status epilepticus) I have demonstrated to my own satisfaction that these manifestations are identical in essence, because they are identical in causation, the variation in degree and intensity being determined by corresponding variation in the dose of the causative agent
>
> Another constitutional effect is to produce a certain amount of mental dulness, with depression amounting, in most cases, to actual narcotism of from a few minutes to several hours following explosions
>
> The infection is, furthermore, responsible for two other series of phenomena The first is local, within the intestines, and is characterized by the elaboration of gas having a characteristic and very offensive odor This gas formation may occur in some degree during the interval between attacks, but is always more marked at the time of attacks, or more properly, explosions It is then associated with more or less violent muscular disturbance of the intestines, and with the sudden stimulation of the salivary, urinary and cutaneous secretions The saliva, urine and perspiration are liable to have the same odor as the gas generated in the intestines It would seem at this time as if the patient had literally been the victim of an internal explosion, the resulting offensive and characteristic odor corresponding, for purposes of illustration, to that of burnt powder Another constitutional effect of epileptic infection is to bring the mean average temperature below the normal standard, approximately to 97 F This mean average is associated

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[3] Reed, C A L Constipation in Relation to Various Diseases Lancet Clinic, March 13, 1915

with some vacillation, which increases until an explosion is reached, after which it again for a while remains near the mean average of the individual case

CONCLUSIONS

This review, and the facts presented, force certain conclusions which are not without practical significance

1 Epilepsy is an infection depending on a specific spore-bearing organism which it would seem that I am justified in calling *Bacillus epilepticus*[4]

2 The *Bacillus epilepticus* invades the system through the alimentary canal, its chief focus being the cecum, from which it reaches the circulation by forced absorption induced by mechanical retardation of the fecal current

3 The *Bacillus epilepticus*, by virtue of its spore-bearing characteristic, under ordinary circumstances and without appropriate treatment, has the ability in most cases to perpetuate itself indefinitely in both the cecum and the blood

4 In a certain very limited number of instances, the *Bacillus epilepticus* seems to be overcome by the natural immunity, but only where there is no focus in the intestines for the continued infection of the system — a circumstance which would seem to account for the spontaneous recovery

5 Treatment, surgical and bactericidal, to be rational and effective, must be addressed to the organism, with reference, first, to arresting its intake from the intestines, and, secondly, to its neutralization and eradication from the blood

Union Central Building

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[4] In my article on 'Diagnostic Methods and Pathologic Constants in Idiopathic Epilepsy' (Footnote 2) I referred to this organism as the epilepticoccus ' This grew out of the fact that its morphology as shown at different stages of development was confusing as to classification Bra indicated this confusion by referring to it as a possible *coccobacille diplobacille streptobacille* ' and finally designating it the neurococcus." Hyatt has, however demonstrated that it is a bacillus. This prompts me to add that the researches chronicled in the foregoing summary had advanced to practical completion, and the organism had been isolated and identified, when a search of the Index Medicus brought to my attention the fact that the same subject had been gone over quite fourteen years previously by M Bra (Compt. rend Acad d sc, Jan 6 1902 Rev neurol 1902 p 447 Bull off Soc. méd d prat., 1902, xii, 289 Rev neurol. 1903 v 408) to whom credit for priority of investigation must be freely accorded As a surgeon, I had approached the question in a quite accidental way and from the strictly surgical standpoint. I was amazed therefore to find that so important an observation as that by Bra, although primarily published in a neurologic journal, had since been practically ignored by the neurologic profession Bra isolated the same organism injected it into rabbits, produced epileptic convulsions in them and regained the organism from the blood of the infected rabbit. The organism was found in seventy consecutive epileptics, while it was not found in twenty consecutive nonepileptics It is thus apparent that the observations and conclusions by Bra like those of my own which I have here recorded conform strictly to the law of Koch But my own investigations while completely confirming the long neglected findings of Bra have however, carried the discoveries further by showing that the organism is a bacillus that it bears spores, that it invades the system through the alimentary canal that it is highly toxogenic that it is susceptible of communication that it is in a measure controlled by both surgical and bactericidal means, and it may be and generally is self perpetuating in both the alimentary canal and the blood It would seem indeed as if Bra's great work were another example of an important discovery having been overlooked by the world just as the discovery of the law of heredity by Mendel was overlooked for many years until it was rediscovered by de Vries

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TRANSIENT AURICULAR FIBRILLATION

IN A HEALTHY MAN FOLLOWING HYDROGEN SULPHID POISONING [*]

G CANBY ROBINSON, MD
ST LOUIS

Auricular fibrillation is now firmly established as the disturbance of the cardiac mechanism causing the absolutely irregular pulse, a very frequent clinical phenomenon and the most usual type of cardiac irregularity observed in patients with heart disease

The nature of the fibrillary process has been interpreted in various ways, such as being the result of multiple stimulus formation in various parts of the cardiac musculature (Lewis[1]) and as a lowering of the refractory phase of the various cardiac muscle bundles (Rothberger and Winterberg[2]) The theory of Garrey[3] rests, however, on a firmer experimental basis than any other that had been advanced He considers that fibrillary contractions of the heart muscle depend on the establishment within the musculature of multiple regions of block or reduced conductivity The impulses thus blocked or delayed take abnormal and circuitous paths, and return to the same portion of the muscle after the refractory state has passed off, but while other portions are still refractory The latter portions are subsequently involved in a similar manner, and the whole tissue mass is thus thrown into a continuous incoordinated contraction, not initiated or sustained by new impulses arising from any definite location

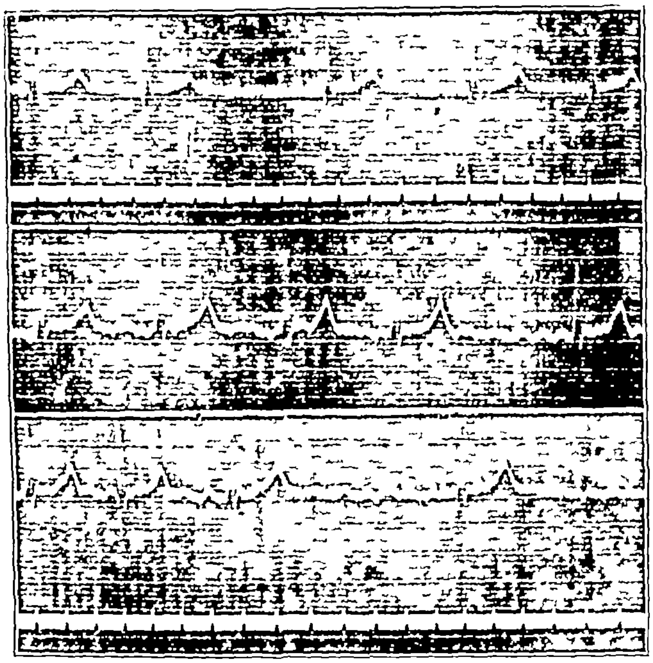

Fig 1 —Electrocardiogram obtained July 23, 1915 at 11 a m showing auricular fibrillation first and second leads

Although Garrey's observations give a clearer understanding of the nature of the fibrillary process, the essential causes which may determine its onset in the human auricles remain obscure Gossage and Hicks[4] have discussed the question of causation of auricular fibrillation, and point out two possibilities The first possibility considers that the fibrillation is due to some morbid condition of the muscle fibers, the actual ultimate stimulus which starts it being some sudden strain or the cumulative effect of prolonged overwork, as might be imagined to occur in valvular disease The second possibility considers that the fibrillation is due to some extrinsic stimulus (for example, an altered chemical constitution of the blood) which, while more likely to influence an already diseased organ, might yet, if sufficiently strong, cause fibrillation in a heart that themselves These facts, associated with the additional fact that we have not so far found the organism about the tonsils or the teeth, would seem to indicate that the alimentary canal is at least the chief, if not the exclusive, atrium for the invasion of the system The final answer on this point ought, however, to be based on a much wider range of observation

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[*] From the Department of Internal Medicine Washington University Medical School.

[1] Lewis The Mechanism of the Heart Beat, London 1911

[2] Rothberger and Winterberg Ueber Vorhofflimmern und Verhofflattern Arch f d ges Physiol 1914, clx, 42

[3] Garrey The Nature of Fibrillary Contraction of the Heart Its Relation to Tissue Mass and Form Am. Jour Physiol. 1914 xxxiii, 397

[4] Gossage and Hicks On Auricular Fibrillation, Quart. Jour Med, 1913, vi 435

COMMUNICABILITY

The mere fact that one rabbit developed epilepsy by licking epileptic germs from the ear of another rabbit, and that other rabbits developed the disease by eating food that had become contaminated by contact with fecal discharges from epileptic rabbits, at once provokes thought as to the possible communicability of the disease from one human being to another This possibility becomes the more impressive in view of two cases now under my observation. Both patients are physicians One, a vigorous man of about 35, who had never been seriously ill, not only attended but assisted in the nursing of an epileptic on whom I had done an ileosigmoidostomy, and in whom there was speedy development of paralytic ileus In an effort to secure action from the bowel, the physician himself administered several enemas About five months later, this physician himself fell in an epileptic seizure, and has since had three other grand mal attacks Another physician, aged a little over 50, at this time in the hospital following operation at my hands, has had epileptic seizures of gradually increasing severity for the last twelve years He recalls that several months before his initial attack, he personally administered an enema or several of them in a case of status epilepticus His blood, cecum, vermiform appendix and retrocecal lymphatics were all positive as to *Bacillus epilepticus* at the time of operation In neither of these cases could there be anything more than a presumption based on circumstantial evidence, that, through some accidental means — possibly the hands of the victims themselves — the organism had been carried from the alimentary canal of the patient to that of the attendant The fact, however, that the records of institutions for epileptics show that a very large proportion of the cases come from the insanitary abodes of vice, poverty and other evidences of degeneracy, in short, from environments in which personal hygiene is at its lowest ebb, is suggestive of contamination rather than of inheritance It must be conceded that while the evidence so far accumulated is largely circumstantial and inconclusive, additional significance is given to it by the character of the organism itself The fact that it is a spore-bearing bacillus, and that the spores are among the most resistant yet discovered, adds to the obvious danger In a nonnutritive wet medium, they have survived under observation for quite four months without evidence of diminished vitality No observation has been made as to their survival in either a dry or moderately moist environment In view of the fact that the organism demonstrably reaches the soil through fecal discharges, and in view of the fact that its spores are highly resistant and that they can and do survive for long periods, there is strong probability that the soil may be recognized as its extracorporeal habitat This probability is increased by the fact that, morphologically, the nearest analogue of the spore-bearing bacillus of epilepsy is the equally spore-bearing bacillus of tetanus, and that the primary habitat of the latter has been demonstrated to be the soil The fact that a larger number of people have epilepsy than have tetanus is another fact suggestive of the relatively greater dissemination of the cause In view of all these facts, it may be well to take due precaution against communication until further investigation can confirm or disprove their apparent significance

PATHOGENICITY

I know no better way to outline the pathogenic effects of this organism on the human system than by quoting from my Los Angeles address of Feb 18, 1915, several months before we had succeeded in isolating the bacillus I then said [3]

> The most important conclusion that has been forced upon me by my clinical observation is that the role of constipation, as a causative factor in epilepsy, is due to the more than probable fact that the really initial cause is to be found in a specific infection. I am so convinced of the accuracy of this conclusion that, in the absence of actual identification of the micro-organism, not only its existence, but many of its characteristics may be predicated upon its clinical manifestations Thus it may be safely assumed that this organism, probably a bacillus, belongs to the gas-forming series Its habitat is the alimentary canal, probably originally the duodenum, but in all instances, finally, the colon It is, furthermore, obviously toxogenic From its general habitat in the intestinal mucosa, the infection may travel in either or both of two directions, namely, outward with the intestinal juice, the succus entericus, and if not promptly carried away in the alvine current, must be taken up again in the process of absorption, and in this way become an additional element in systematic contamination

In further discussion of this then hypothetic organism and its toxins, I added that they, one or both,

> have the faculty of accumulating in the tissues and in the circulatory media Once within the blood current, they display a selective affinity for the sensory and motor centers It is, furthermore, obvious that their effects upon these centers are relative to the size of the accumulated dose and the tolerance of the individual When the accumulation goes beyond the point of tolerance, we may have, first, a flash of unconsciousness with a minimum of muscular disturbance, or none at all (petit mal), or second, sudden and profound loss of consciousness, with violent convulsive disturbance (grand mal), or third, persistent and almost coalescent seizures of the latter variety (status epilepticus) I have demonstrated to my own satisfaction that these manifestations are identical in essence, because they are identical in causation, the variation in degree and intensity being determined by corresponding variation in the dose of the causative agent
>
> Another constitutional effect is to produce a certain amount of mental dulness, with depression amounting, in most cases, to actual narcotism of from a few minutes to several hours following explosions
>
> The infection is, furthermore, responsible for two other series of phenomena The first is local, within the intestines, and is characterized by the elaboration of gas having a characteristic and very offensive odor This gas formation may occur in some degree during the interval between attacks, but is always more marked at the time of attacks, or more properly, explosions It is then associated with more or less violent muscular disturbance of the intestines, and with the sudden stimulation of the salivary, urinary and cutaneous secretions The saliva, urine and perspiration are liable to have the same odor as the gas generated in the intestines It would seem at this time as if the patient had literally been the victim of an internal explosion, the resulting offensive and characteristic odor corresponding, for purposes of illustration, to that of burnt powder Another constitutional effect of epileptic infection is to bring the mean average temperature below the normal standard, approximately to 97 F This mean average is associated

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[3] Reed C A L Constipation in Relation to Various Diseases Lancet Clinic, March 13, 1915

cannot be determined The case is one, however, which *seems to point out* that auricular fibrillation in man may be set up by an extracardial factor alone

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GRANULOMA PYOGENICUM OF THE LIP

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Despite the comparative frequency with which granuloma pyogenicum occurs, the condition has attracted very little attention in this country The disorder was first described under the title of "botryomycosis hominis" in 1897, by Poncet and Dor,[1] who believed the disease to be analogous to botryomycosis of horses (Rivolti[2]) Two years later Sabrazes and Laubie[3] demonstrated the identity of the so-called "botryomycosis" with the common *Staphylococcus aureus,* and their conclusions were verified by Bodin[4] in 1902 Since then French writers have referred to the condition as "pseudo-botryomycosis hominis" or "granulome pedicule" (Lenormant)[5] In 1904, Hartzell[6] reported a series of four cases of the disease from America, and suggested for it the very apt designation of "granuloma pyogenicum," a title which has received general approval and acceptance Kuttner[7] has proposed the name of "granuloma telangiectodes," but it is hardly probable that this appellation will be widely adopted, as it is neither so euphonious nor so appropriate as the one introduced by Hartzell Wile[8] has recently made an exhaustive study of the condition He concludes that "the entire group of so-called pseudo-botryomycosis hominis, granuloma simplex, granuloma telangiectodes and granuloma pyogenicum may be grouped in one class, and may be regarded as ordinary granulation tissue, appearing, for as yet undetermined reasons, in the unusual form of a tumor The etiologic factor is not a fungus, but probably the *Staphylococcus aureus,* perhaps in an unfavorable soil or in an attenuated form The histologic changes are essentially the same in all forms, minor differences being simply in degree of vascularity and inflammation Although never malignant, the growths tend to recur, unless cauterization of the base is practiced ")

The little tumors are commonly, but not invariably, situated on those parts which are most frequently subjected *to trauma, consequently* the hands and feet are favorite sites for their development (Brocq[9])

Cases involving the lip have been reported by Poncet,[1] Savariaud and Deguy,[10] Delore,[11] Legroux,[12] Picque,[13] Le Berre,[14] Terrier,[15] Balzer and Alquier[16] and Noury[17] in France, and Gilchrist[18] in America During the past year I have observed three instances in which this region was affected

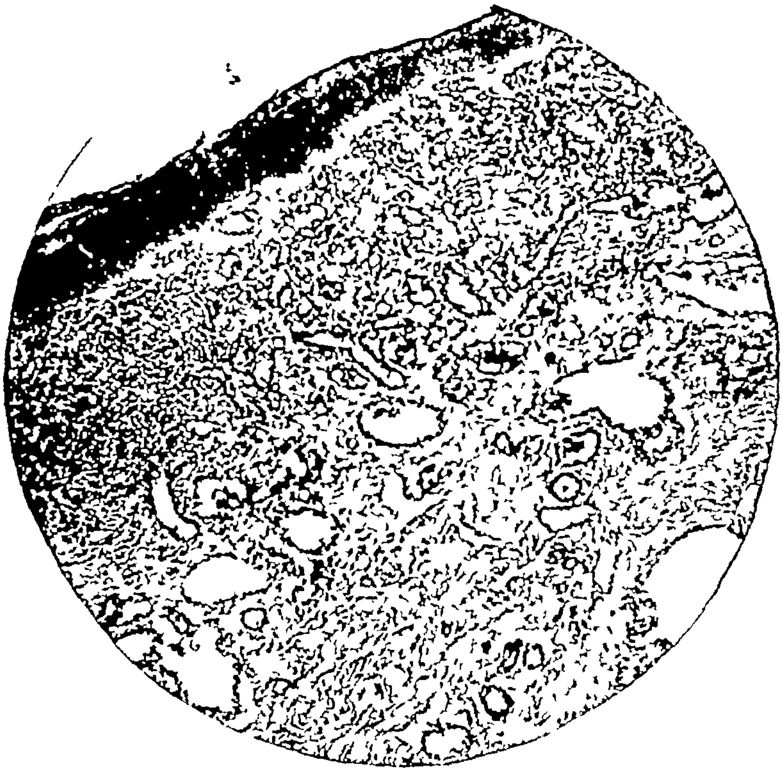

Fig 1 (Case 1)—Granuloma pyogenicum of the lip, near base of growth Composition of epithelial covering is shown, together with character of connective tissue stroma and size and distribution of blood vessels and cavities An area of leukocytic infiltration is shown at the left hand margin (Leitz, No 4 ocular, No 3 objective, 18 cm extension)

REPORT OF CASES

Case 1—In a housewife, aged 25, referred to me by Dr M A Hanna of Kansas City, the lesion had developed on a small, raw surface left by a fever blister near the mucocutaneous juncture on the lower lip, at a point not far from the median line, and had existed eight months At first it appeared only as a small red papule, but it gradually increased in size until, at the end of three months, it was as large as a grain of wheat The surface was smooth, red and shiny, and the lesion bled profusely when handled The base was not indurated There was no pain at any time On examination, the patient was found to be a slender but well nourished woman, with brown hair and eyes, and a smooth, soft skin With the exception of a few acne lesions on the face and chest, the integument on parts other than the lip was normal The growth was a small, pedunculated tumor, about the size and shape of a cherry stone dark red, with a shiny, glazed epithelial covering Histologically it consisted of a mass of *new and old connective tissue,* permeated by numerous large, thin-walled vessels, and enclosed in a thin epithelial capsule which consisted of four or five layers of slightly altered prickle cells, an attenuated stratum granulosum, and a loosely adherent stratum corneum The papillary bodies near the base of the pedicle were hypertrophied, but within the growth they had totally disappeared, leaving the under surface of the limiting membrane smooth and unmarked The dense connective tissue in the center of the tumor was traversed by innumerable blood vessels of various sizes, running in all directions Numerous leukocytes, lymphocytes, and plasma cells were observed along the courses of the capillaries and scattered about in the stroma Only a few groups of cocci were found, and these were located near the base of the growth

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[1] Poncet and Dor Rev de chir, 1897, xviii 996 Arch gén de méd. 1900, iii 129, Lyon méd, x, No 24 p 97 ibid 1898 Nos. 5 and 6 pp 145 and 189

[2] Rivolti Gior d. Anat, Pisa, 1884 x 12

[3] Sabrazès and Laubie Arch. *gén de méd. 1899* p 118

[4] Bodin Ann de dermat. et de syph 1902 iii, p 289

[5] Lenormant Ann de dermat et de syph 1910 v Series 1 p 161

[6] Hartzell Jour Cutan Dis. 1904 p 520

[7] Kuttner Beitr z. klin Chir 1905, xlvii 1

[8] Wile Unna s Festschrift Monatsh f prakt. Dermat 1910

[9] Brocq Traité élémentaire de dermatologie pratique Paris 1907 i *795*

[10] Savariaud and Deguy Gaz. d hôp 1902, p 115

[11] Delore Lyon méd, 1899 No 29 Gaz. d hop November 1900 p 117, Lyon med, 1900 No 18 Gaz. d hôp 1902 p 102

[12] Legroux Thèse de Paris 1904

[13] Picqué Tr Soc. de chir, 1903

[14] Le Berre Thèse de Paris, 1904

[15] Terrier Tr Soc. de chir 1900

[16] Balzer and Alquier Ann. de dermat. et de syph 1901 p *479*

[17] Noury Thèse de Bordeaux, 1915

[18] Gilchrist Jour Cutan Dis 1904 p 524

Case 2—In a man, aged 25, a law student, referred to me by Dr Jabez N Jackson, the lesion had developed from a tiny razor cut, on the left side of the lower lip, and had been present four months It had been removed twice during this period, once by means of a ligature and again with scissors, but had promptly recurred each time As in Case 1, there was profuse hemorrhage on even slight manipulation of the tumor, and the patient was greatly worried, suspecting malignancy

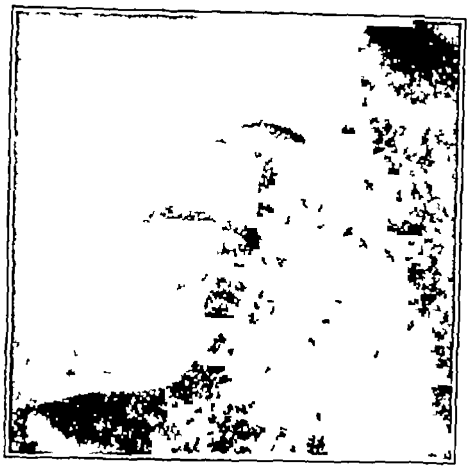
Fig 2 (Case 1) —Granuloma pyogenicum of the lip, of eight months' duration

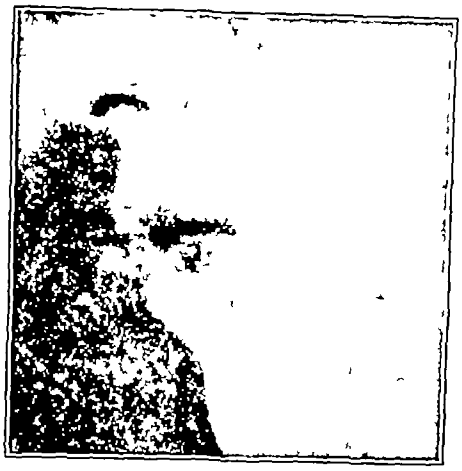
Fig 3 (Case 2) —Granuloma pyogenicum of the lip, of five months' duration

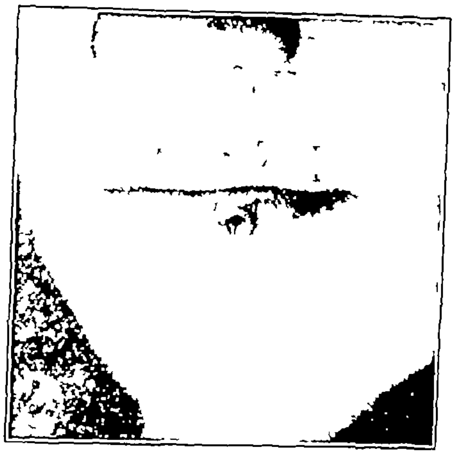
Fig 4 (Case 3) —Granuloma pyogenicum of the lip, of seven months' duration

Case 3—This occurred in a housewife, aged 30, referred to me by Dr W Connelly Anderson of Kansas City, Mo The lesion which was a trifle larger than the head of an ordinary pin, had developed on the site of a fever blister, and had been present seven months Superficial cauterization with silver nitrate had aggravated the condition instead of benefiting it The tumor was soft and compressible, but bled on very slight provocation The patient said that the growth temporarily increased in size immediately preceding each menstrual period

TREATMENT

In all three instances excision, under novocain anesthesia, was practiced, the raw bases sponged dry, and then thoroughly and deeply frozen by means of a hard, pointed stick of Pusey's carbon dioxid snow While this agent is not a direct antiseptic, it is probable that the arterial hyperemia which follows its use is of assistance in combating infection, and the cauterizing action of the refrigerant leaves little to be desired in the treatment of growths of this character

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The Art of Authorship—The two most engaging powers of an author are to make new things familiar, and familiar things new—Johnson

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HYDROSALPINX WITH TWISTED PEDICLE

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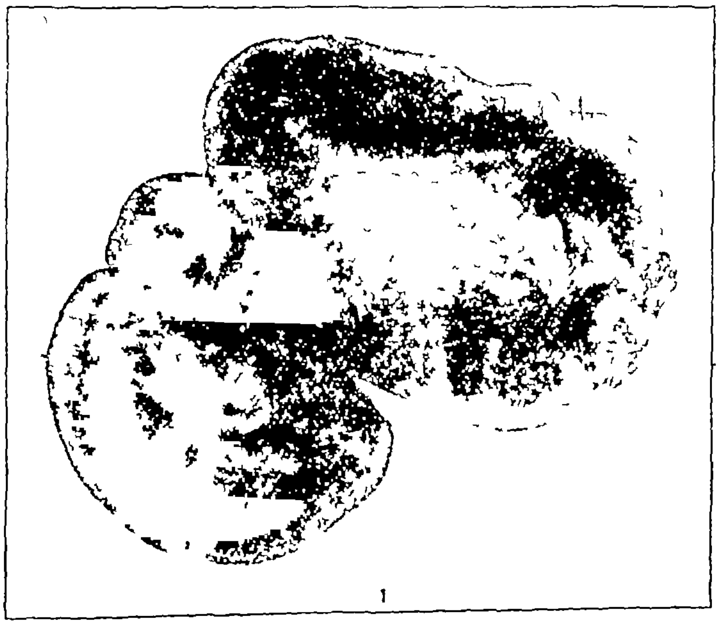
I believe that hydrosalpinx with twisted pedicle has not been given the attention as a definite surgical condition which is its due Ovarian cyst with twisted pedicle receives definite consideration in every differential diagnosis in which an acute pelvic lesion with tumor arises, yet hydrosalpinx with twisted pedicle is not mentioned in some of our textbooks of differential diagnosis, and others merely mention the possibility I have encountered two such cases within a brief space of time, and feel that they should be reported Both of these patients suffered the sudden, severe seizure which is characteristic of the same accident with ovarian cyst, and in each instance a complete twist of the broad ligament was found beneath a tremendously dilated fallopian tube The tumor mass was in each instance from blue to black, and the fallopian tube contained blood The lesion found in each was a hematosalpinx, and should be so styled, yet the foregoing caption is given since a study of the history of these cases, together with a careful study of the pathologic material, leaves little doubt as to the fact that these patients suffered primarily from hydrosalpinx of very considerable size, that the enlarged tube became twisted on its broad ligament pedicle in a manner quite analogous to the ovarian cyst twist, and that the effusion of blood into the tube was secondary and was the direct result of the circulatory disturbance caused by the twist in the broad ligament



Hydrosalpinx with twisted pedicle Tumor mass in Case 1 (Whitacre)

These cases recall to my mind a number of earlier cases in which a large, freely movable hydrosalpinx was encountered, and in which this twist might easily have occurred The infrequency of the accident herewith reported will probably be explained by the fact that hydrosalpinx is usually accompanied by more or less extensive adhesions within the pelvis, and that these adhesions prevent free mobility of the cystlike tube

Case 1—Miss A, aged 23, was referred to me in April 1915 by Dr Rich of Roy, Wash She had suffered from gonorrhea two years previously, had borne a child one year previously, and had suffered to a moderate degree from pelvic discomfort and pain Three days previous to her admission to the hospital she had been seized with sudden severe pain in the right iliac region, vomited and felt very ill A rapidly increasing pulse and temperature rigidity of the right rectus, constant pain, and the discovery of a tumor mass in the right side led to the conclusion that the patient suffered from acute appendicitis with abscess formation My own examination of the patient introduced an element of doubt regarding this diagnosis, since bimanual examination revealed a large rounded, movable mass which occupied the entire right half of the pelvis and extended beyond the median line The mass was not extremely sensitive, seemed just beneath the abdominal wall and was not particularly marked in the culdesac Ovarian cyst with twisted pedicle and ectopic pregnancy were not fully excluded and an exploratory incision was made in the midline There was much free blood-colored serum in the free peritoneal cavity and a dark blue or black cystlike tumor presented A complete turn was demonstrable in the pedicle of this freely movable tumor and it became at once evident that the tumor mass was made up of a tremendously enlarged left tube and a huge ovary, and that the twisted pedicle was the broad ligament The tumor mass which is shown in the accompanying illustration measured 7 inches in length and 5 inches in diameter The recovery of the patient was uneventful

Case 2—Mrs B, aged 45 married multipara, was seen in consultation with Dr P B Swearingen of Tacoma It is unnecessary to give the history of this patient in detail except to state that the early symptoms of severe abdominal pain, vomiting, distention, and the failure to move the bowels by enemas, were suggestive of intestinal obstruction, and that our subsequent study of the case led us to operate on her for ovarian cyst with twisted pedicle The lesion was precisely the same as that found in Case 1 except that the bluish-black mass was not quite so large This patient also made an uneventful recovery

I feel that even though these cases present a symptomatology and call for an operative management which differs in no way from ovarian cyst with twisted pedicle, they should have a definite pathologic classification

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The Reporting of Venereal Diseases—A recent *Bulletin* of the health department of New York City reviews the situation with reference to the reporting of venereal diseases, and states that there has been a perceptible falling off in the number of cases reported during 1915 It is believed that this is largely due to a falling off in the number of cases reported by hospitals and institutions Whereas during 1914 a total of 14 484 were reported from this source, during the year 1915 the figure dropped to 10,065, a decrease of more than 4,000 cases The percentage of positive cases reported through the department's laboratory during 1915 also shows a diminution of 5 per cent over that of 1914 The records show that the number of cases referred by the profession to the venereal diagnostic clinics is steadily increasing despite the larger number of physicians who are making the tests themselves It seems that as in the past physicians have refrained from reporting their cases in private practice, only 103 cases of venereal disease having been reported through this source for the entire year of 1915 The report points out, in this connection, that every safeguard is provided to protect the secrecy of such reports, and that it is not obligatory to report the cases by name, the initials alone being sufficient

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THE MICROSCOPIC EXAMINATION OF FINGER NAIL DEPOSITS

SIGNIFICANCE IN FORENSIC MEDICINE AND IN PUBLIC AND PERSONAL HYGIENE

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SAN FRANCISCO

The microscopic examination of the deposits under the finger nails promises to be of importance in forensic medicine and also in certain phases of public sanitation and personal hygiene This form of examination has been known for some time, and has been practically applied in a number of criminal cases both in this country and in Europe, but so far it has not been adopted as an officially recognized routine in the examination of criminals or those suspected or accused of having committed certain crimes The possibilities of this procedure became apparent to me over twenty-five years ago when incidentally examining the scrapings from my own finger nails and those of my laboratory assistants The number and variety of substances found was astonishing Since that time the microscopic examination of finger nail deposits has been made a laboratory exercise for students in connection with the study of fiber and of body cells and bacteria

This particular exercise was at first sandwiched in as a diversion rather than a part of the regular course Each student of a class of forty or fifty was requested to mount the scrapings from the nails of the second and third fingers of the right hand (in case of right handed persons) on a slide in a drop of water and to examine this carefully under the high power (450 diameters) of the compound microscope The findings proved interesting and not infrequently astonishing to the student The most important part of this laboratory exercise was the interpretation of the findings The findings gave evidence of the routine labors engaged in for periods of from one to eight days previous, and of personal habits, of the kind and quality of clothing worn, of business occupations, etc

It was found that there was a very notable difference in the contents of the deposits of the nails of the right and the left hands, and also in the deposits of the nails of fingers and thumb of the same hand Numerous examinations proved that the ordinary methods of cleaning the hands by means of soap, hot water and clean towel, inclusive of the usual nail trimming and polishing, as observed by persons of clean and sanitary habits, does not materially alter the microscopic findings, in other words, the usual hand toilet operations do not clean the hands and certainly do not cleanse the inner surface of the free ends of the finger nails Even the vigorous use of the nail brush with soap and hot water does not result in a removal of all the deposits Of far greater influence is the habitual close trimming of the finger nails as observed by some persons If the nails are regularly trimmed very close, to the point of nearly causing bleeding, very little deposit of any kind will find lodgment This practice is rare, however, and may be considered the exception to the rule

The bacteriologic findings of the finger nail deposits are also very interesting The streptococcus group apparently predominates in most persons, rather than the staphylococcus or the colon bacillus group, as one might reasonably expect The organisms found in the rather limited number of cases (143) examined predominate in the following order

1. Streptococcus group, the acid fast varieties predominating.
2. Staphylococcus group.
3. *Bacillus coli* group, almost invariably present.
4. Bacilli, cocci and spirillae probably derived from mouth, soil, food, water, body surface, nose, eyes, sewage, dust, dirt, etc.
5. Occasional yeast cells, spores and filaments of higher fungi.
6. Larvae of vermes, occasional amebas, diatoms, algae, etc.

From the medicolegal standpoint, the examination of nail deposits will prove of greatest value in those criminal acts in which great violence is employed, as in murder, physical encounters of all kinds, and rape or attempted rape. In such cases it would be desirable to examine the nail deposits of both the accused and the accuser, for as is known, persons are not infrequently falsely accused, and particularly is this true in charges of rape or attempted rape. For example, scratches and other skin abrasions on hands and face of the accused should reveal skin epithelium, dermal fragments, blood corpuscles and possibly hair fragments of the accused in the nail deposits of the victim. If such findings proved wholly negative, especially in the absence of marked injury to the genitalia of the accuser, it would point to either false accusation or perhaps voluntary submission. Valuable evidence may also be obtained in other criminal acts. A husband was accused of having induced his wife to submit to the performance of criminal abortion and to have disposed of the fetus. The examination of the husband's finger nail deposits revealed a number of frustules of fresh water diatoms and a few filaments of oscillaria which led to the suspicion that he had buried the fetus in some marshy soil. Careful search along the marshy edge of a nearby stream revealed no newly made grave, but a slightly scooped out depression in the edge of the stream itself proved to be the burial place, and on digging disclosed the nearly full term fetus.

Efficiency in the line of investigation suggested above depends on long experience in micro-analytic work and on a wide range of microscopic study of all kinds of substances, animal, vegetable and mineral. The time required to qualify as expert in this line would vary, depending on personal differences, but in all probability the requisite experience, in addition to the necessary educational preparation, such as medical course, university course, special college course, etc., could not be attained in less than ten years of constant application.

In medicolegal cases the nail deposits should be taken in the presence of the chief of police, if possible. In some cases it may be desirable and necessary to take the nail deposits on the spot, and the analyst must therefore be vested with the necessary police authority to do this, and he must furthermore be authorized to call to his assistance any police officer that may be available. The deposits should be examined immediately, if possible, in a laboratory supplied with the necessary apparatus and chemical reagents. There must be on hand suitable report blanks on which the findings are to be recorded in ink or by means of an indelible pencil.

After the examination is completed, the findings should be summarized and interpreted. The greatest care must be observed in the interpretation of the results of the examination. The analyst must qualify as an expert and he must be free from all bias and in no case must he allow prejudice to influence him in any manner whatsoever. When called on to give an opinion, he must be able to speak as one who knows, and he must cast aside all prejudice both as to the scientific and moral principles which may be involved and as to the persons or personalities implicated. At no time must he allow himself to be in any way influenced by the opinions expressed by any member or members of the police force with whom he is of necessity associated.

Thus far the medical profession has given little attention to the part played by the finger nail deposits in the transmission of infections. That there is danger in the handshake is generally recognized and admitted by the laity as well as the medical fraternity, but so far there is no effort made to do away with this ancient custom. There are certain persons who refuse to shake hands or who do so under mental protest. The Chinese do not shake hands with each other, but perform this ceremony by shaking hands with themselves.

The chief source of danger in the handshake is in the deposits under the finger nails rather than in the hand and fingers. The more important infections traceable to the finger nail deposits may be divided into two groups as follows:

1. Autoinfections.—There is no doubt that many skin diseases are traceable to scratching. Of such nail borne autoinfections we may mention lupus, acne, boils and carbuncles, and septicemia. In this manner infections are carried to nose, to eyes, to ears and to mouth and throat. Skin infections are transferred from one part of the body to another by the scratching and skin picking habit or by constantly "digging" or "picking" at a sore spot, and as a result some persons are never quite free from boils and acneic eruptions, particularly persons with low opsonic indexes to the causative infections. Infants and young children are constantly picking up infections with their finger nails and transferring these to the mouth, nose, throat and eyes. Nail biters very frequently infect themselves through the materials under the nails. Children and some women have the habit of bringing the fingers to the mouth, thus favoring the transfer of infecting material from finger nails to mouth.

2. Heteroinfections.—In many cases the infection is traceable to the finger nail deposits of others, as by handshaking, stroking or caressing the head or face, etc. There is the case of the husband whose neck on the left side was never long free from one or more small pimples or boils traceable to his wife's habit of playfully pinching his neck. He ascribed the trouble to starched collars, but several changes in the laundry brought no relief. During the prolonged absence of his wife on a visit with relatives, the trouble disappeared entirely to reappear again on her return with a renewal of the playful habits.

It certainly requires no lengthy argumentation to prove that there is danger in the finger nail deposits. Most valuable information could no doubt be obtained through a careful microscopic and bacteriologic investigation of the nail deposits of the different classes and races of people. Such information would be of inestimable value to physicians, to sanitarians and to the public in general. Furthermore, the occasional if not routine examination of finger nail deposits of patients would frequently give the attending physician valuable information regarding the source of the causative infections and personal habits which might have bearing on the disease

This brief outline of a very important as well as interesting subject will, it is hoped, serve as a stimulus to others for making additional observations and investigations along the lines indicated

THE PSEUDOREACTION IN THE SCHICK TEST AND ITS CONTROL *

ABRAHAM ZINGHER, M D
NEW YORK

The pseudoreaction in the Schick test is caused, not by the soluble diphtheria toxin, but by the protein substance of the diphtheria bacillus which is present in the solution used for the test The reaction may be obtained in individuals who have enough natural antitoxin to render them immune to diphtheria It is important, therefore, to control these pseudoreactions, which are quite frequent in the adult, especially women (from 20 to 30 per cent), but relatively rare in children These control tests may be made after the reaction with the regular Schick test has developed, or, especially in the adult, the two tests may be made simultaneously, one on each forearm and the clinical course of the reactions thus compared

For the Schick test, the bureau of laboratories of the health department is supplying an outfit which contains carefully measured amounts of undiluted diphtheria toxin This outfit, as previously described by me,[1] consists of a capillary tube which contains a little over one minimum lethal dose of a ripened diphtheria toxin, a small rubber bulb for expelling the toxin, and a 10 c c bottle of normal saline solution for diluting the toxin Every 0 2 c c of the dilution represents one fiftieth minimum lethal dose, the amount used in the Schick test

The outfit for controlling the positive, pseudo and combined reactions is similar to the Schick test outfit, but the toxin in the capillary tube has been heated to 75 C (167 F) for five minutes Heating the toxin at this temperature destroys the soluble diphtheria toxin, but does not appreciably affect the protein of the diphtheria bacillus

We made an attempt during the past two and one-half years, during which time the work with the Schick test has been carried on by us at the Willard Parker Hospital and various other institutions, to control as many of the pseudo and combined reactions as possible Convinced of the fact that the pseudoreaction was a local anaphylactic response to the protein of the diphtheria bacillus, we at first used a solution containing the autolyzed substance of the Klebs-Loeffler bacillus This autolysate consisted of a forty-eight hour agar growth of the diphtheria bacillus (No 8 Park & Williams) which was suspended in salt solution in the proportion of 10 c c of saline to a Blake bottle culture The bacterial suspension was washed four times with saline solution, made up to its original volume with distilled water, then shaken for two hours, killed at 57 C (134 6 F) for forty-five minutes and allowed to autolyze in the thermostat over night The solution was then passed through a Berkefeld filter, and the filtrate considered as a concentrated autolysate Ten c c of the autolysate, representing the growth of one Blake bottle, injected subcutaneously into a guinea-pig, did not show any evidence of soluble toxin When the bacterial suspension was injected before its passage through a Berkefeld filter, a small knoblike induration developed, which soon disappeared For use in the control of the Schick test in human beings, the concentrated autolysate was diluted 1 20 with salt solution, and 0 2 c c injected intradermally Typical false reactions were obtained in the pseudo and combined Schick cases, but none in the negative or positive cases By using a more concentrated solution of the autolysate, faint reactions could be obtained even in individuals who gave a negative Schick reaction

The difficulty of estimating the amount of bacillus protein in the diphtheria toxin broth used in the Schick test which would serve as a guide in making a proper dilution of the autolysate, prompted us finally to abandon the autolysate as a suitable control, and use either a toxin which had been slightly overneutralized with antitoxin, or a heated toxin in a dilution similar to that used in the Schick test In the overneutralized toxin (2 units of antitoxin to each L + dose of toxin) we had added however, another element, the antitoxin This, though in extreme dilution (1 part to a million as finally injected), might yet be objected to as a possible additional source of error We finally used the heated toxin as representing probably the most accurate way for obtaining a proper control test A dilution of the protein substance of the diphtheria bacillus is thus obtained which is exactly similar to that in the solution used for the Schick test The capillary tubes in the outfits represent simply a convenient and accurate way for heating the carefully measured amounts of diphtheria toxin

The Research Laboratory of the New York City Health Department is now supplying these outfits They will remain good for use for a long time, since there is no danger of deterioration of an unstable toxin

The following are the directions accompanying the outfits

DIRECTIONS FOR USING HEATED DIPHTHERIA TOXIN IN CONTROLLING THE SCHICK REACTION

Break off one end of the capillary tube push the broken end carefully through the neck of the rubber bulb until it punctures the diaphragm within, and enters the cavity of the bulb, then break off the other end of the tube Hold the bulb between the thumb and middle finger, place the index finger over the opening in the larger end of the bulb and expel the toxin into the saline Rinse out the capillary tube by drawing up saline several times then cork the bottle and shake the diluted toxin Inject 0.2 c c *intracutaneously* on the flexor surface of the forearm or arm Observe the reaction at the site of injection at the end of twenty-four, forty-eight, seventy-two and ninety-six hours, and compare with the original Schick reaction

The capillary tube in this outfit contains the culture fluid similar to that used in the Schick test, but heated to 75 C for five minutes The heating destroys the diphtheria toxin, which is the active agent in the positive Schick reaction, but does not affect the protein substance of the diphtheria bacillus, which produces the pseudoreaction

In an individual who gave a *positive* reaction only, the control test with the heated toxin will be negative. In one who gave a *pseudoreaction,* the control reaction will be of about the same size and appearance, and pass through the same clinical course as the original reaction, e. g., the two reactions showing a similar central area of redness of varying size, surrounded by a secondary areola which shades off into the surrounding skin. Both reactions begin to appear in about six to eighteen hours, reach their height in twenty-four to thirty-six hours and disappear in three to four days, leaving a poorly defined area of pigmentation and generally no scaling.

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* From the Research Laboratory of the Department of Health City of New York

[1] Zingher Abraham A Simple Outfit for the Distribution of Toxin for the Schick Test The Journal A M A July 24 1915 p 329

In an individual who gave a *combined* reaction in the original test, both the positive and the pseudoreaction may be detected. The positive reaction becomes manifest in the original test at the end of three to four days, when the pseudo-element of the reaction has disappeared, as a definite circumscribed area of redness, which measures from 1 to 2.5 cm. in diameter and shows superficial scaling with beginning brownish pigmentation. The pseudoreaction is detected in the control test with the heated toxin; the reaction will not be as marked as in the original Schick test, but passes through the typical clinical course of a false reaction.

FRACTURE OF THE GREATER CORNU OF THE HYOID BONE RESULTING FROM MUSCULAR ACTION *

H. P. ASHE, M.D., PITTSBURGH

Fractures of the hyoid bone due to muscular action are very rare. Stimson[1] mentions only two such cases out of forty-five hyoid fractures collected by Malgaigne, Hamilton, Gibb, Gurlt and himself.

The following case of fracture of the left greater cornu of the hyoid bone, having resulted from muscular action, will consequently be of interest.

Miss E. H., aged 29, domestic by occupation, called on me, Feb. 18, 1916, complaining of pain and swelling in the neck, and particularly of change of voice, the occasional absence of which so alarmed her as to be the incentive toward seeking medical aid.

The week previously, February 11, while engaged in the task of arranging portieres, she inclined her head forcibly backward, and at the time felt and heard, as she expressed it, "something break in the neck." Swelling of the neck anteriorly, localized pain in the neck produced by motions of the head or tongue, bloody sputum, deglutition embarrassed by frequent choking, and alteration of voice variously muffled, hoarse, or absent were the symptoms early manifested. Cough and dyspnea were not experienced.

The patient was a tall, healthy looking, well developed muscular young woman, whose past medical history was uneventful, barring a tonsillectomy and an appendicectomy undergone a few years previously, since which time she has enjoyed excellent health.

A very discernible, well defined swelling, without ecchymosis, occupied the anterior and anterolateral cervical regions, beginning sharply at the superior border of the hyoid bone, and continuing into and traversing the submental region as far as the inferior border of the inferior maxillary bone.

Emphysema was not present. The hyoid bone was well outlined on palpation, disclosing no perceptible irregularity, save a slight inward deviation of the left greater cornu. Pain and tenderness were elicited when pressure was made at a point on the bone near the juncture of its left greater cornu with its body. Slightly to the left of this point was a slightly enlarged, tender submaxillary lymphatic gland. Examination of the floor of the mouth and oropharynx proved negative.

As a week had elapsed since the occurrence of the accident, and as union takes place promptly in hyoid fractures, crepitus and preternatural mobility were not present.

The contours and external surfaces of the thyroid and cricoid cartilages were unaltered, and both could be freely manipulated without any pain or discomfort. At the time of the examination, the dysphagia, bloody sputum, and pain due to motion of the tongue had all disappeared, and, according to the patient, the cervical swelling was diminishing.

Further intended study of the case by laryngoscopy and roentgenography was prevented by failure of the patient, who lives out of the city, to report subsequently. March 6, information indirectly obtained revealed only that the patient was still hoarse.

The fact that this patient was treating the external swelling with liniments for a week prior to calling on professional aid, which would not have been sought had she not been frightened by occasional speechlessness, renders it strongly probable that fractures of the greater cornu of the hyoid bone sequential to muscular action are more frequent than shown by the literature, and warrants the belief that cases presenting as many symptoms as the one just narrated, not to mention cases manifesting more vague and fewer symptoms, occur and run their course without recourse to the physician or surgeon.

The treatment was expectant, the patient being ordered to refrain from use of the voice, and to secure approximate immobility of the head and neck by means of wearing a high, stiff collar.

1304 Colwell Street.

A CASE OF BOTHRIOCEPHALUS LATUS INFECTION

J. J. SINGER, M.D., ST. LOUIS

Assistant in Medicine, Washington University

Cases of *Bothriocephalus latus* infection are so rare in this country that it seems advisable to report all cases as they present themselves, if only to awaken interest and stimulate the search for others.

In 1904 Edsal[1] said that American literature does not provide a sufficient number of cases to indicate that the parasite is by any means common, but the authentic cases that he has found, together with a few reliable cases reported to him in private communications, led him to believe that those whose practices or hospital services brought them in touch with foreigners, especially Russians, Finns, and Swedes, are most likely to meet this parasite.

Many practitioners are content to make a diagnosis of "tapeworms," without identifying the species. This accounts for the small number of known cases.

At any rate, the *Bothriocephalus latus* is comparatively rare in this country, only twenty-two cases having been reported in America up to 1904. Since then there have been only eight other cases that I could find in the literature on the subject. Only one of these cases[2] was in an American-born boy, of Finnish parentage. This boy had never left the state of Minnesota. In all probability native foci may develop in the United States through the agency of our foreign-born element, and therefore it is necessary to report and follow up all cases if we wish to keep this parasite from getting a foothold in this country.

Nichorson believes that the probable reason that practically no cases develop in this country is our method of preparing fish for food, the larvae being destroyed in cooking. He states that he has frequently found the larvae of the *Bothriocephalus latus* in fish caught in the Great Lakes. Huber reports seven cases, seen in as many years, all of which were in Polish patients.

The case I wish to report presents nothing especially new. The specimen of the bothriocephalus is excellent.

The patient, Mrs. I. C., living in St. Louis, a native of Vilna, Russia, called at my office Jan. 23, 1915. She complained of indefinite pains in the abdomen, especially in the left side, lower quadrant. There was no fever or vomiting, she had a sensation of fulness in the stomach only slightly relieved by active purgation Her appetite was poor and she had been sleeping poorly, during the last few months she felt weak and depressed For the past few years she had noticed sections of tapeworms in her stools Sixteen years ago, she also passed sections of tapeworm, at which time she was given an anthelmintic, and passed a tapeworm 15 feet long, she did not remember whether or not the head was recovered She felt quite well for twelve years, when she again passed sections of the worm At this time she suffered with fainting spells and attacks, similar to the present

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* Read before the Allegheny County Medical Society, March 21, 1916.

[1] Stimson: Practical Treatise on Fractures and Dislocations, Ed. 6, Philadelphia, Lea & Febiger, 1910, p. 180.

[1] Edsal: Am. Med., 1904, viii, 1087.

[2] This case was reported by Nichorson in 1906.

She was again given anthelmintics with no results From that time to this she has been passing sections at irregular intervals She never felt perfectly well A sister and her mother both had this parasite The patient states that it was the custom in their vicinity of Russia for everybody to take worm medicine

Physical examination revealed a small woman of fairly good color, the pupils reacted to light and accommodation, teeth fair, pharynx negative, no glandular enlargement, no enlarged thyroid Lungs and heart were negative abdomen very sensitive along the course of the descending colon The pelvis was negative except for some tenderness in the left adnexa Blood smears were negative, hemoglobin 90 urine negative, stools showed sections of *Bothriocephalus latus* and numerous eggs, temperature 98 4 pulse 76, respiration 22

She was ordered to take castor oil on the night of January 23, eat nothing but Holland herring, and drink considerable water On the 24th at noon she was given a 10 grain capsule of male fern every half hour until six were taken, four hours later 2 ounces of castor oil were given

At midnight of the 24th she was taken with severe cramps, followed by perspiration and severe diarrhea All the feces were collected Up till 12 o'clock on the 25th, ten stools in all were passed The stools were examined and 27 feet of the *Bothriocephalus latus* were recovered including the head The specimen was sent to the Washington University Museum

The following day the patient felt quite well her appetite was good and all tenderness had disappeared No eggs were found in the stools

Carleton Building

SPLIT TENSOR FASCIAE FEMORIS

Leo Bernd M D, Philadelphia

B W aged 18 in playing football had a dislocation of the right hip which was reduced without much trouble The hip continued weak and seemingly became dislocated on the slightest adduction The patient wore a cast for a month and then a brace In the fall of 1915 he tried to play football, but became so much worse that it came out even when he did the crawl" stroke in swimming

Roentgenoscopy revealed no abnormal condition of the joint in either abduction or adduction In consultation with W M Jackson Merrill a diagnosis was made of a split in the tensor fasciae femoris muscle which caused the trochanter to buttonhole through the split in the muscle The patient was anesthetized an incision over the trochanter was made, and a split in the muscle about 4 inches long was found Three mattress sutures of chromic kangaroo tendon were inserted, one continuous chromic catgut suture, three interrupted silkworm sutures through the skin and fascia, then a subcutaneous suture Gauze soaked in alcohol was used as a dressing A plaster cast from the knee over the hip was finally applied

At the end of two weeks the patient was discharged Four weeks later he was in swimming and going to dances with no return of symptoms The crawl" stroke swimming is the exercise advised as it is not a side kick, but an up and down motion of the feet and anterior muscles of the leg

The case is unusual, and unless the slit had been sewed up, the boy would have been an invalid, as he could not exercise and was becoming a nervous wreck

New Instruments and Suggestions

HYDROCHLORIC ACID AS A DECOLORIZING AGENT FOR THE TUBERCLE BACILLUS*

Robert A Keilty, M D, Philadelphia

The purpose of this paper is the determination of the value of hydrochloric acid as a decolorizing agent for the tubercle bacillus This acid has been used in my laboratory for over two years in the preparation of several hundred specimens These include blood, sputum, smears, urine, feces, tissues, both frozen and paraffin sections, and cultures

I believe that it is wise to use any method of technic, once established, without variation In this way it is possible to arrive at accurate comparative results Technics, too, should be carefully scrutinized for points of error, and after all possible sources of mistake are corrected, one may go ahead with any given line of work Nothing is more discouraging than to have an otherwise carefully prepared research clouded by faulty technic

In selecting a decolorizing agent one finds a great variety in use and the variations in the percentages advised are marked The methods range from a few seconds with 30 per cent nitric acid to an indefinite time with 1 per cent acid alcohol In my early work, I used Pappenheim's solution, which is both a decolorizer and a counterstain For the examination of routine smears I found this very satisfactory, but owing to numerous criticisms I decided to change

The various acids were tried and hydrochloric acid finally decided on This is not generally advocated and, so far as I know has never been suggested stronger than 25 per cent I started primarily with 30 per cent and have been using this routinely for the past two years, allowing it to remain in contact with the material thirty seconds by the watch Lately I have increased this to one minute, but I think that thirty seconds is sufficient for a properly prepared slide

In the determination of the action of hydrochloric acid on the tubercle bacillus I used (1) a fresh culture one month old isolated from the sputum, (2) one one year old originally isolated from the sputum and the transplant three months old and (3) fresh sputum From each of these fourteen slides were made They were stained five minutes with carbolfuchsin cold, the excess drained off and 30 per cent hydrochloric acid applied The first slide was washed off in one minute the second in two minutes and so on every minute up to ten, then fifteen twenty, twenty-five and thirty minutes were allowed, in order, for each of the remaining slides All were counterstained one minute with Loeffler s methylene blue

It was found that the tubercle bacillus retained its acid-fast properties in all instances, including thirty minutes' decolorization, with several variations In all a fading of the red in the bacilli is quite noticeable after five minutes There is a tendency to become refractile which is later lost Some bacilli retain a bright red color, especially the solid forms, while some at the same time have become mere shadows In proportion, at thirty minutes the shadowy forms predominate There is only a slight tendency to take on the blue color This is more noticeable in the old culture, which had some blue forms from the beginning Finally the old culture as a whole retained more of the acid-fast property than either the young culture or the sputum

I wish to call attention to the uselessness of heating carbolfuchsin in the preliminary stain This is an entirely unnecessary procedure in my experience, which covers several years in the use of cold stain The use of heat is one of those methods which is mechanically advocated by one textbook after another, is probably not practiced by most men doing considerable work, and is the source of much inconvenience to the man who has an occasional slide to examine

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[*] Presented before the Philadelphia Pathological Society Jan 27, 1916

[*] From the McManes Laboratory of Pathology, University of Pennsylvania

I have not studied hydrochloric acid in relation to the other acid-fast organisms In thick smears and in sputum, after washing the hydrochloric acid with water, it may be necessary to run on a few drops of 95 per cent alcohol In most instances, and in thin smears, this is unnecessary, since the Loeffler's blue is an alcoholic solution and will, if allowed to remain three or four minutes, completely decolorize the thick areas

CONCLUSIONS

1 Make thin smears on slides, fix with heat, stain with cold carbolfuchsin five minutes, decolorize with 30 per cent hydrochloric acid thirty seconds or more by watch and counterstain with Loeffler's methylene blue

2 Thirty per cent hydrochloric acid for one minute will not decolorize any strain of tubercle bacillus with which I have worked

3 In this percentage and for this time hydrochloric acid will decolorize all artefacts such as rims of red blood cells, bits of leukocytes, granules of protoplasm and all ordinary nonacid-fast organisms

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STABILIZED GENTIAN VIOLET

W D Stovall, M D, and M Starr Nichols, B S,
Bacteriologist and Assistant, Respectively, Wisconsin State Laboratory of Hygiene
Madison, Wis

Of the many stains which serve the bacteriologist in the capacity of a differential stain, there is not any single stain which has so wide an application as the one known as Gram's The only disadvantage in the use of the stain is that the gentian violet used deteriorates, and on that account should be freshly prepared when wanted In a laboratory in which smears for gonorrhea are examined at frequent intervals, it is quite a convenience to have the differential stain, Gram's stain, made up ready for use, and it was this necessity which led us to experiment with different formulas as well as with different organic preservatives in an effort to find a method of stabilizing the gentian violet solution

CHEMICAL

Gentian violet is a mixture of pentamethyl and hexamethyl pararosanilin, and belongs to the class of stains known as the triphenylmethane dyes In the manufacture of this dye it is prepared first as the colorless color base and then subsequently converted into the colored compound by treatment with hydrochloric acid This change is represented by the graphic formula (Fig 1) The hydrochloric acid neutralizes the hydroxyl group in the colorless base, and immediately the chlorin atom migrates from the position which the hydroxyl group occupied to the amino group, with a corresponding rearrangement of the intramolecular structure which gives the recognized quinonoid grouping If a solution of gentian violet is made alkaline with sodium hydroxid, the reaction is reversed and the colorless color base is again formed Anilin is one of the ingredients in the regular Gram violet solution, and on account of the amino group acts like a weak base The instability of the violet solution is therefore probably due in part to its action

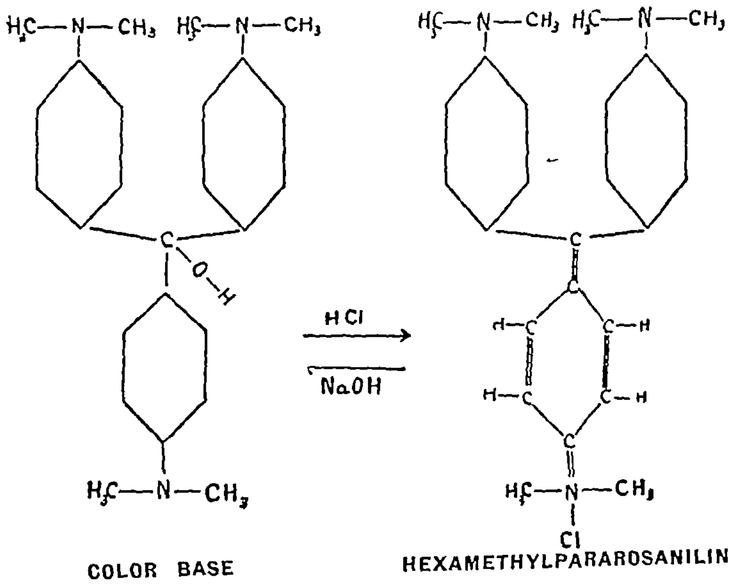


Fig 1 —Formula showing change

The ammonia of the air in the average laboratory probably also plays its role in decolorizing the stain To prove that small amounts of a base would destroy the color in the violet solution, a series of tests were made, and it was found that N/500 sodium hydroxid would precipitate completely in one hour the color from a 1 10 dilution of the regular violet stain, and that N/10,000 sodium hydroxid would precipitate completely the same strength solution in three weeks Along with the same series, a test with N/100 acetic acid in 1 10 dilution of the stain showed entire preservation after eight weeks' time These tests proved conclusively that the stain could be preserved with small amounts of acids

STAINING OPERATION TIME MINUTES					RESULT OF EXAMINATION*				1000 cc. CONTAINS 10% ALCOHOL PLUS			
STAINING SOLUTION NO.	GENTIAN VIOLET SOLUTION	GRAMS IODIN	ALCOHOL 95%	SAFFRANIN COUNTER-STAIN	GONOCOCCUS GRAM - NEG	STAPHYLOCOCCUS GRAM - POS	BACILLUS TYPHOSUS GRAM - NEG	DIPLOCOCCUS GRAM - POS	ACID NORMALITY	ANILIN C.C.	GENTIAN VIOLET gm	% STRENGTH — SOL AFTER 5 MONTHS
1	1	½	3	½	0	6	0	4	33	36	8	791
2	1	½	3	½	0	7	0	5	20	36	8	833
3	1	½	3	½	0	7	0	6	20	32	8	935
4	1	½	3	½	0	8	0	8	066	32	8	875
5	1	½	3	½	0	8	0	8	033	32	8	880
6	1	½	3	½	0	5	0	3	010	36	8	625
7	1	½	3	½	0	7	0	6	005	36	8	770
8	1	½	3	½	0	8	0	7	010	28	8	835
9	1	½	3	½	0	9	0	9	005	28	8	895
10	1	½	3	½	0	10	0	10	001	28	8	812
11	1	½	3	½	0	10	0	10	—	36	8	50

* Arbitrary unit for staining density 0 = no stain, 10 = completely stained

Fig 2 —Results of test

The next series of tests undertaken was to determine the concentration of acid which was best suited for this purpose Eleven different solutions were prepared, ten of which contained acid, while the eleventh was made in the regular manner except that no acid was added At the end of five months the gentian violet was determined quantitatively in each of the eleven solutions These results are tabulated in the last column of Chart 2 It will be seen that in no instance did any one of the solutions which were preserved with acid deteriorate below 62 per cent, while the average strength is about 85 per cent of the original strength On the other hand, the one which was not preserved dropped to 5 per cent of the original strength

BACTERIOLOGIC

At the time the foregoing stains were prepared, it was deemed absolutely necessary that the preserved stain be tested out on known gram-positive and gram-negative organisms To do this we used pus from a case of known gonorrhea containing the gram-negative diplococcus, typhoid culture (gram-negative), staphylococcus (gram-positive) and diplococcus (gram-positive) The four smears were placed side by side on each of eleven slides, and each slide stained in exactly the same manner Figure 2 gives the results of this test

From this chart we see that a high concentration of acid is objectionable, because the gram-positive organisms have a tendency to lose their stain Test Stain 9 was selected as the proper one for general use, as this showed practically no effect of acid on the staining quality Accordingly, a large batch of stain having the formula of the one tested was made up, and is the one which we use regularly in the laboratory in general diagnoses It has the following formula

Anilin	28 c c
Gentian violet (Gruber	6 gm
Alcohol 95 per cent	100 c c
N/1 hydrochloric acid	5 c c
Distilled water	q s ad 1 000 c c

The gentian violet is dissolved in the alcohol The hydrochloric acid is added to the anilin, and the whole is dissolved in enough water to make 900 c c The aqueous solution is filtered and added to the alcoholic solution of the stain The whole is filtered and is then ready for use

This stain keeps for about three months under ordinary laboratory conditions

A NEW APPARATUS FOR DRAINAGE OF THE PLEURAL CAVITY

William Lerche, M D, St Paul

After recent experience with a case of cancer of the esophagus in which I performed intrathoracic resection of the organ I decided in future similar cases to drain the pleural cavity for twenty-four hours after the operation The removal of the drainage tube, however would have to be effected without admitting air to the pleural cavity To this end I have devised a simple apparatus Although the apparatus was originated for intrathoracic surgery, it is in cases of empyema that I expect it to become of great practical utility, because it is easily applied under local anesthesia and the negative pressure which is essential to facilitate the expansion of the lung can easily be regulated

In Figure 1 are shown the details of the apparatus *a*, *a*, outer circular chamber in which the air can be rarefied by the suction bulb connected at *f*, thus fixing the apparatus to the skin, *b*, central chamber loosely filled with iodoform gauze around the drainage tube *c*, *c*, the drainage tube fitted air tight by rubber tubing at *e*, *d*, the rubber tubing connecting the drainage tube with a Woulfe's bottle, shown in Figure 2

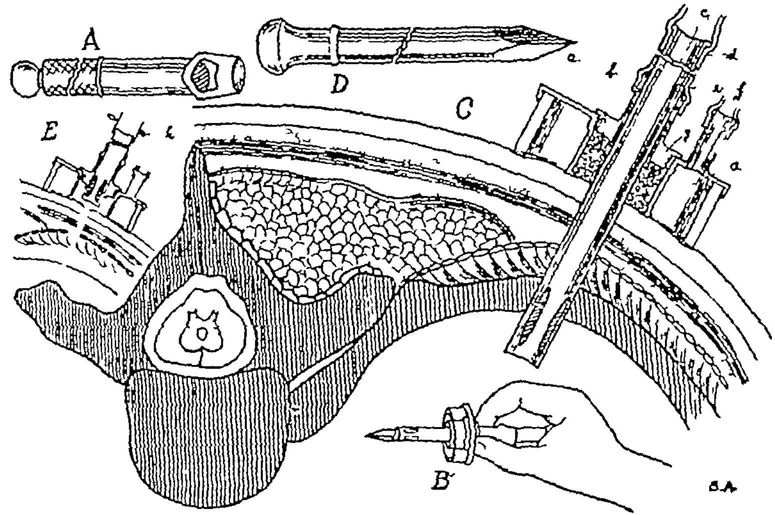


Fig 1 —Apparatus for drainage of pleural cavity *A* circular knife (28 French) for removing a circular piece of skin exactly corresponding to the size of the drainage tube *B* apparatus with trocar held ready for introduction *C* apparatus in position *D* trocar *E* position of drainage tube after its removal from the pleural cavity

In Figure 2, the apparatus, *a* is held in contact with the skin by rubber tubing, *b*, *b* *b*, encircling the body and over the right shoulder, and is furthermore glued to the skin by the aid of collodion applied to the bottom of the walls of the inner and outer chambers The rubber tubing and the collodion when dry are sufficient to hold the apparatus on air tight, but until the collodion has dried and when the drainage tube is being removed, suction may be applied by the aid of the rubber bulb, *j*, to prevent the apparatus from being pulled off The Woulfe's bottle, *e*, is provided with a quicksilver gage for the observation of the intrathoracic pressure The outlet from the bottle is at *f*, where a little valve (enlarged at *g*) fitted into the end of the rubber tubing prevents the air from returning to the bottle Instead of the valve a rubber bulb with a contrivance by which the air pressure can be regulated by a thumb screw, as seen in *k*, may be inserted at *f* When the intrathoracic pressure is as desired, the outlet of air can be shut off by the clip, *i* After drainage the rubber tube connecting the drainage tube, *c*, Figure 1 with the Woulfe's bottle is clamped, and tube *c* is withdrawn from the pleural cavity by a gentle rotary motion until its distal end gets some distance into the central chamber (as shown in *E*), where it is left until the wound in the chest wall has healed sufficiently to prevent air from entering the pleural cavity

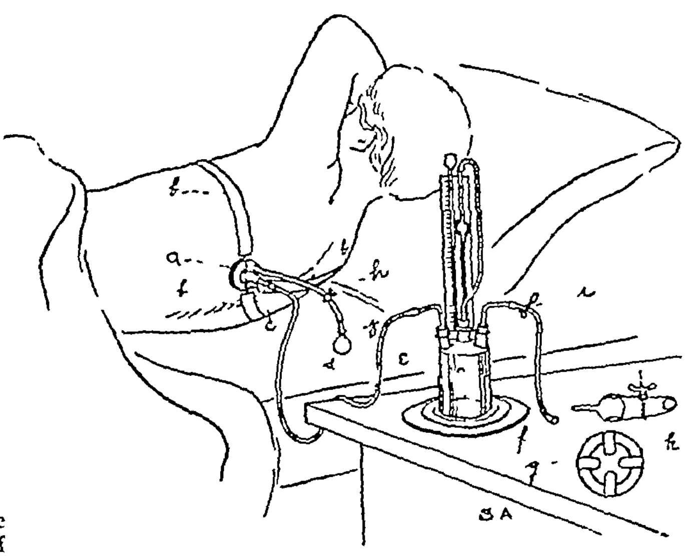


Fig 2 —Apparatus in position

The most comfortable position for the patient, after intrathoracic resection of the esophagus, is to lie on the right side half way on the back When therefore, the drainage tube is introduced into the pleural cavity before it is closed, as low down as possible and close to the mediastinum, it will drain at the most dependent point

In case of empyema, the drainage tube may be introduced between ribs or a rib may be trephined with an instrument corresponding in size to the drain

Lowry Building

Campaign Against Blindness—The first annual report of the National Committee for the Prevention of Blindness covering the first ten months of 1915 has just been published This committee was formed to coordinate the activities of various local organizations It also carries on field and research work preparation of literature on the subject and the supply of lecture material for the publicity campaign Ophthalmia neonatorum and blindness due to alcohol have received most of the attention More than 90 per cent of the funds for the work were provided by the Rockefeller Institute and the Russell Sage Foundation The seventh annual report of the New York State Committee for the Prevention of Blindness is included with that of the national committee

AN ELECTRIC COLOR FINDER

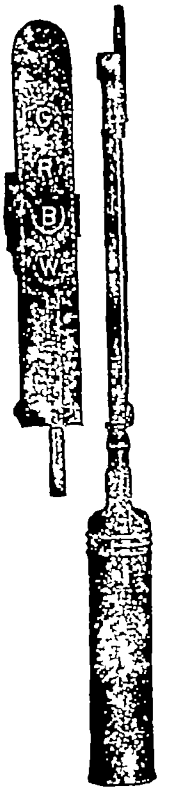
TO BE USED IN MAPPING OUT THE VISUAL FIELD AND THE BLIND SPOT

F Phinizy Calhoun, A B, M D, Atlanta, Ga

While I am not an advocate of electrically illuminated test objects in preference to the ordinary methods now used in mapping out the visual field and the blind spot, I believe such devices have their field of usefulness and can often be employed to advantage, for example, in office or dispensary work on dark days or in the evenings, and bedside examinations in poorly illuminated rooms or wards To meet such requirements I have devised, and used for nearly two years, an illuminated color finder patterned after the very excellent and well-known instrument of Dr Clifford Walker of Boston

The instrument is about 10 inches long, and the head contains four perfect colors (white, blue, red and green) made in thin paper and protected by layers of glass, arranged on a slide which is controlled by a thumb guide placed out of the way near the handle The thumb guide brings into view any one of the colored disks, which is illuminated by a miniature frosted lamp placed behind the color slide and supplied by a hand battery (or a rheostat attachment) There is an additional slide which fits on the face of the instrument and contains a 1, 2 or 3 mm opening The entire exterior is painted dull black and appears neat

I am indebted to E B Meyrowitz of New York maker of the instrument, for suggestions in its perfection.



Electric color finder

THE INTRAVENOUS USE OF MERCURIC CHLORID

A NOTE ON A NEW METHOD OF ADMINISTRATION, WITH SPECIAL REFERENCE TO PREVENTION OF VEIN OBLITERATION

P I Nixon, M D, San Antonio, Texas

Since salvarsan and neosalvarsan are no longer obtainable, the use of various mercury salts intravenously has become more widespread This method of treating syphilis is not new, the use of mercuric chlorid having been introduced by Baccelli in 1893 It has been revived from time to time, and each time abandoned because obliteration of the veins has been produced This is a definite disadvantage and a very possible danger, I myself have seen it eventuate in a local slough and edema of the forearm

Any method of administration, therefore, which promises to prevent or decrease the frequency of vein obliteration is to be welcomed The method which I am reporting is so simple that it is quite possible that it has been described before, it certainly is not in general use, and I have not been able to find a description of it in the literature It is infinitely more simple than the method described by Thompson,[1] and accomplishes the same purpose in a more aseptic and less painful manner It has the added advantage of using no heterologous serum

The method is as follows Mercuric chlorid, from one-tenth to one-third grain, depending on the dose, is dissolved in 10 c c of freshly distilled water and drawn into a 20 c c syringe The needle with the syringe attached is introduced into the vein, and 10 c c of blood are aspirated into the syringe The mixture is then injected in the usual manner, without withdrawal of the needle from the vein

It will be seen that the object of the method is to substitute the insoluble, comparatively nonirritating mercury albuminate for the soluble, irritating mercuric chlorid—a substitution which takes place in vivo when mercuric chlorid is injected directly into the vein I have found out experimentally that there is more than enough albumin in 10 c.c., or even 5 c c of blood to change the mercuric chlorid in the largest desirable dose, and Byrnes[2] has previously worked out the same problem

I have used this technic in fifty injections without obliterating a single vein To put the method to a thorough test, I have selected small lateral veins and at approximately the same point given as many as ten injections, at three day intervals, without disturbing the vein

One cannot hold that this method is established by this small series of injections In my hands it has been very satisfactory Its ultimate utility will be proved or disproved only after it has been tried out more extensively by different observers

205 Hicks Building

Therapeutics

HEMORRHAGIC CONDITIONS

VISCOSITY

By viscosity is usually meant cohesion between the particles in a fluid It is a physical characteristic of all fluids, and hence of blood It was thought that through a study of this property of blood some information of value in the diagnosis and treatment of disease might be gained

In order to obtain a relative value for the viscosity of blood, it is compared to distilled water, which is considered unity It has been found by means of various viscosimeters that the viscosity of blood in the normal person is between 4 5 and 5 5 This value may be influenced in various ways It has been found that cold baths increase and warm baths diminish the viscosity[3] Various diets continued over a period of time will also influence the viscosity of the blood Meat eaters show an increased viscosity, and vegetarians a lowered viscosity Heavy muscular work and profuse perspiration will increase viscosity, while the ingestion of large amounts of fluid will tend to diminish it[4] Whereas chloroform and ether have no effect on viscosity of blood, alcohol, no matter how introduced, whether by mouth or intravenously, will increase it

Heubner[5] calculated that from two thirds to three fourths of the viscosity of blood was due to the corpuscles This is proved by the fact that immediately after hemorrhage the viscosity is diminished In the anemias, even those associated with such chronic conditions as nephritis, cardiac conditions, tuberculosis or carcinoma, there is a diminished viscosity[6] In primary pernicious anemia it is unusually low, Austrian[6] finding it as low as 1 7 In all of these cases there was, of course, a diminished corpuscle content of the blood

In cases in which the number of corpuscles is increased, as in polycythemia, the viscosity is high In one case mentioned by Austrian, the red blood corpuscle count was over 8,000,000 and the viscosity 13 6 In diabetes mellitus, if polycythemia is present, the viscosity will be higher than normal

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[1] Thompson Loyd The Intravenous Injection of Mercurialized Serum in Syphilis, The Journal A M A, May 1, 1915, p 1471

[2] Byrnes C M The Intradural Administration of Mercurialized Serum in the Treatment of Cerebrospinal Syphilis, The Journal A M A, Dec 19 1914, p 2182

[3] Burton Opitz Russell The Viscosity of the Blood The Journal A M A July 29 1911, p 353

[4] McCaskey, G W The Viscosity of the Blood The Journal A M A, Nov 14, 1908, p 1653

[5] Heubner, quoted by McCaskey (Footnote 2)

[6] Austrian Johns Hopkins Hosp Bull January 1911 p 9

In asphyxia or conditions in which there is associated dyspnea or cyanosis, such as decompensated cardiac lesions, pneumonia or emphysema, the viscosity is increased In jaundice it is also higher, owing probably to cholemia It is increased in arteriosclerosis, although it bears no relation to the blood pressure In typhoid fever it is unchanged, whereas in malaria it may be normal or subnormal, depending on the amount of anemia present

Perhaps the only time when an increased viscosity would be considered an important factor is when an increase may mean added work to an already weakened cardiac musculature Such would be the decompensated hearts, or in pneumonia, or where there is hypertension In the latter class of cases iodids are of value Boveri,[7] in a study of twelve cases, found that there was a marked diminution in the viscosity in eight of these cases following the administration of iodids It has also been shown that good hygienic treatment with plenty of fresh air will tend to lower the viscosity

BLOOD PLATELETS

Duke[8] has pointed out the importance of the blood platelet count in studying those pathologic conditions in which such an irritant as a chemical or bacterial toxin has entered the blood stream Blood platelets have an important function They have long been thought to be intimately connected with hemorrhagic diseases, and it has been supposed that they form a nidus from which fibrin extends in the formation of a clot Other factors such as antithrombin, prothrombin and calcium are also more or less disturbed in hemorrhagic diseases They appear to be closely associated with the blood platelets, or some substance produced by the blood platelets, since the latter disintegrate during normal coagulation of the blood

Duke[9] believes that purpura hemorrhagica "is due wholly or entirely to an almost complete absence of blood platelets from the blood" He has shown that although the coagulation time may be normal, the bleeding time is prolonged The bleeding time is determined by blotting up on absorbent paper at half minute intervals the blood from a bleeding point The rate of decrease in size of the blots gives an index of the rate of decrease in the intensity of the hemorrhage Duke quotes many others who also found a decrease in the number of blood platelets in purpura hemorrhagica

Unless stained immediately after obtaining the blood, blood platelets will degenerate rapidly They stain blue or violet with the usual stains, and are about one fourth to one half the size of a red blood corpuscle They contain no nucleus and no hemoglobin

Brockbank,[10] after carefully studying stained blood smears, states that the blood platelets originate from the red blood corpuscles Wright[11] thinks that they are derived from large giant cells, called megakaryocytes, found in bone marrow The normal blood platelet count varies between 150,000 and 500,000 It may vary in normal conditions In the new-born child after the first week the number is nearer the upper border of the normal count, that is, about 400,000 During menstruation it may be below normal

It is interesting to follow the blood platelet count in some of the pathologic conditions Duke[9] states that Osler, Riess and others have found a reduced number in pernicious anemia Others have found the count low in pneumonia, lymphatic leukemia, aplastic anemia and typhoid fever Dimon[12] states that in splenomyelogenous leukemia there is a high count, from 500,000 to 1,000,000, while in lymphatic leukemia the platelet count may be reduced to between 30,000 and 150,000

Duke[8] states *that there is a general agreement* that during febrile periods of acute infectious diseases the count is reduced, whereas during convalescence it is increased He cites, as an example, diphtheria, in which, during the febrile period, the count in one case was 3,000, and during convalescence as high as 750,000 In chronic tuberculosis the count is usually high, even going above 1,000,000 In occasional cases it may be low This is also true of chronic nephritis In other conditions, like pneumonia and typhoid fever, the count is reduced Duke explains these counts by assuming that in those cases in which the count is high, only a mild irritant is produced which has no strong toxic action on the blood-platelet forming organs On the other hand, in cases in which the number is reduced, the toxin produced exerts a powerful irritant action He proved these assumptions by finding the platelets reduced after injections into animals of diphtheria toxin, killed typhoid bacilli, benzol (benzene, C_6H_6) and tuberculin

(To be continued)

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[7] Boveri Presse méd, 1908 lxiii 546

[8] Duke, W W Variation in the Platelet Count, The Journal A M A Nov 6 1915, p 1600

[9] Duke W W The Pathogenesis of Purpura Hemorrhagica with Especial Reference to the Part Played by Blood Platelets Arch Int Med November 1912 p 445

[10] Brockbank Lancet London June 8 1912 p 1526

[11] Wright Jour Morphology July 1910

[12] *Dimon New York State Jour Med 1913 xiii 561*

New and Nonofficial Remedies

The following additional articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association Their acceptance has been based largely on evidence supplied by the manufacturer or his agent and in part on investigation made by or under the direction of the Council Criticisms and corrections are asked for to aid in the revision of the matter before publication in the book "New and Nonofficial Remedies"

The Council desires physicians to understand that the acceptance of an article does not necessarily mean a recommendation but that, so far as known, it complies with the rules adopted by the Council

W A Puckner, Secretary

MEAD'S DRY MALT SOUP STOCK—A mixture containing desiccated maltose and desiccated dextrin (about equal parts) 47 per cent wheat flour, 47 per cent, potassium carbonate 1 per cent and moisture, 5 per cent U S patent No 1,171,724 (Feb 15, 1916, expires 1933)

(Accepted for inclusion with the appendix to New and Nonofficial Remedies)

Prepared by Mead Johnson & Co Jersey City, N J

PHENOLPHTHALEIN-Monsanto — A non-proprietary brand complying with the standards for phenolphthalein (N N R, 1916 p 245)

Manufactured by the Monsanto Chemical Works St Louis

Child Labor Legislation—The Children's Bureau of the U S Department of Labor has compiled and recently published a compendium of child labor legislation in the United States, which contains all legislation in force on Oct 1, 1915 Two charts show the minimum ages and the hours of labor in the various states Seven tables contain analyses of the laws relating to minimum ages requirements for entering employment, hours of labor, compulsory school attendance employments in theater and public exhibitions There is also included the text of the different laws

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SATURDAY, MAY 20, 1916

ACIDOSIS AND THE DIARRHEAS OF INFANCY

Acidosis is being much discussed in relation to the pathologic phenomena associated with it Only a few years ago the term was usually limited to those abnormal manifestations of the presence of acetone, diacetic acid and betahydroxybutyric acid which are now more appropriately classed under the designation of ketone substances, the immediate causes of ketonuria or acetonuria Subsequently acidosis was the name also applied to a condition in which the increased elimination of ammonia by the kidneys indicated the abnormal accumulation of acids, not necessarily of the group just referred to, somewhere in the body The ammonia, acting as a neutralizing base, furnished an index of the occurrence of undue quantities of acid somewhere in the metabolic cycle

From the broader standpoint of today it is conceivable that acidosis may result when any abnormal acids, such as betahydroxybutyric or lactic acid, are produced in excess in the body It is possible also that acidosis may result when bases are lost from the body to an exceptional degree Finally, an added category is suggested by the possibility that some types of acidosis may be associated with the failure of the acid excretory function of the kidney Under ordinary conditions much acid is eliminated, chiefly in the form of acid phosphate, by renal activity, as the usual preponderatingly acid reaction of the urine testifies A failure of this special regulatory function of the kidney would result in a retention of acid phosphate with a consequent true acidosis

An exceptionally interesting instance of an acidosis, which may prove to be of the renal retention type, has been described by Howland and Marriott[1] of the Harriet Lane Home and the Department of Pediatrics of the Johns Hopkins University It attends attacks of severe diarrhea not of the ileocolitis type in infants The various signs now recognized as indicative of a disturbance in the acid-base regulation have been detected in suitable cases Thus alterations in respiration are observed, the usual abdominal type of breathing by the young being succeeded by one which is both costal and abdominal Again, a lowered tension of carbon dioxid in the alveolar air, likewise a symptom of acid intoxication,[2] is found in the diarrheal cases, sometimes even when a distinct hyperpnea could not be definitely detected The infants here concerned may further have a greatly increased hydrogen ion concentration in the blood serum, and the acidosis may also be revealed by a diminution of the alkali reserve of the serum, an increase in the amount of alkali required to alter the reaction of the urine (alkali tolerance), and by a diminution of the combining power of the hemoglobin with oxygen

The time has passed when all types of acidosis are to be interpreted in the same way Howland and Marriott have furnished reason for believing that in the cases of infantile diarrheas to which they refer the acidosis is not due to the presence of acetone bodies It has not been demonstrated that it is due to loss of base Probably it is due to deficient excretion of acid phosphate by the kidneys At any rate, this at present appears to be the most likely explanation It is known that in severe diarrhea, the urinary secretion may be markedly diminished even to the point of complete anuria, the kidney becoming functionally more or less inactive, even though no organic changes may be present That diminished acid excretion and consequent retention of acid phosphate in the body fluids would occur under these conditions would seem probable In support of the hypothesis is the finding of an increase in the phosphate content of the blood serum in the course of severe diarrhea

The hypothesis outlined suggests a tentative method of treatment All measures should, of course, be used to prevent the cessation of renal activity, especially since the secretion of urine is often very scanty and often ceases for hours at a time The best of all procedures is the constant administration of water or salt solution by mouth if possible, if vomiting prevents this, as it frequently does, water must be given by rectum, subcutaneously or intravenously But beyond these obviously desirable measures, as well as the accepted methods of controlling the excessive diarrhea itself, the existence of an acidosis, as seen in the hyperpnea or other more accurate signs, should be energetically combated Alkalies, such as sodium bicarbonate, must be freely administered in any effective way until the reaction of the blood is again normal Large doses may be required The results of such treatment, vigorously applied, are reported to be encouraging As Howland and Marriott point out, the condition resulting from the acidosis or accompanying it is most serious even if its exact nature is not understood Therefore, they add, in all cases of severe diarrhea, even though there are no evidences of acidosis, it is advisable to use sodium bicarbonate until the urine is alkaline Its administration may prevent the development of acidosis When further observations have made clear the processes on which the acidosis depends, we may be able to direct our treatment more intelligently At present we are forced to combat the result and not the cause It is certainly a helpful step in the direction of progress, however, to have some scientifically justifiable evidence on which to base a therapeutic program for these severe diarrheas, even if further researches shall lead to a modification or reversal of the plan of treatment

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[1] Howland, John, and Marriott, W McKim Acidosis Occurring with Diarrhea, Am Jour Dis Child, May, 1916, p 309 Preliminary reports on this subject have been made in the Proceedings of the Society for Experimental Biology and Medicine, 1914, xii, 51, and in the Bulletin of Johns Hopkins Hospital, 1916, xxvii, 63

[2] For a discussion of the significance of carbon dioxid tension in the alveolar air, see Peabody Am Jour Med Sc, 1916, cli, 184 Howland and Marriott Bull Johns Hopkins Hosp, 1916 xxvii, 63

VACCINE TREATMENT

Looking backward over the development of active immunization by vaccines during the last fifteen years, we appear to be at the termination of one epoch in the therapeutics of infectious disease In this issue, Hektoen[1] traces the stages by which vaccines which were first employed with attempted scientific control have come into indiscriminate and unrestrained use, with no guide beyond the statements which commercial vaccine makers are pleased to furnish with their wares Already most physicians are realizing that the many claims made for vaccines are not borne out by facts, and that judging from practical results there is something fundamentally wrong with the method as at present so widely practiced As clearly shown by Hektoen, "the simple fact is that we have no reliable evidence to show that vaccines, as used commonly, have the uniformly prompt and specific curative effects proclaimed by optimistic enthusiasts and especially by certain vaccine makers, who manifestly have not been safe guides to the principles of successful and rational therapeutics "

But out of this wild period from which we are emerging there have come certain benefits which promise to be more or less permanent The study of prophylactic immunization against typhoid and other similar diseases has been fostered, and the time of attainment of its present efficacy perhaps hastened, the effects of active immunization in accelerating the development of immunity and recovery in certain chronic localized infections of known etiology have been studied, the search for sources of infection from which autogenous vaccines could be obtained has led to a more careful examination of patients, who have thus been indirectly benefited by having the source of their troubles discovered and removed

It has been difficult for most physicians to distinguish between the relatively limited field of prophylactic immunization in which scientifically controlled experiments and carefully observed and analyzed results have confirmed the claims of the method, and the other field of the use of vaccines in which mixtures of bacteria and their products have been indiscriminately introduced into patients suffering from all manner of disease, infectious and noninfectious, acute and chronic, without study of the patient, or knowledge of the etiology or pathology of the disease But the latter use of vaccines cannot be condemned merely on the ground of its empiricism As Theobald Smith has said, "We cannot do without empiricism wholly We owe valuable suggestions and discoveries to it These are like clearings in the forest unconnected with other clearings, but destined to become the nucleus of a healthy scientific growth " When, however, it becomes evident that empiricism has run riot, that it has wholly divorced itself from scientific control, and when, in addition, its results, impartially reviewed, are shown to be unbeneficial, we must conclude that such a clearing has been badly located, and that it never can occupy a worthy place on the highway of scientific medical progress

In regard to the more recently developed methods of intravenous therapy in typhoid fever, Hektoen points out that certain new concepts and theories are introduced which need diligent study and correlation before their application to the problem can be settled Here again we find ourselves in another pioneer clearing in an unexplored forest Only the future can determine whether this clearing is to become a useful station, or whether after a brief existence as a point of interest it will prove to be far removed from the thoroughfare of legitimate travel Certainly the development here should proceed cautiously

Already a similar procedure has been introduced for the intravenous treatment of other subacute and chronic infectious diseases, such as arthritis, and some observers have asserted that the amelioration of the symptoms in the joints following the treatment is sufficient to establish it as a worthy routine treatment The fact that in the subjects of arthritis and even in normal persons the intravenous injection of bacterial or other protein is followed by a rather characteristic sequence of phenomena of fever, chill and leukocytosis by no means stamps the method as a justifiable type of empiricism Indeed, other observers have noted that patients so treated relapse, and that the number of those who do not relapse is apparently no greater than the number of untreated patients who recover spontaneously Such treatment, ineffective in itself, actually hinders recovery by distracting attention from the search and removal of the cause of the arthritis

The fact that much time and effort of the past ten years appear now to have been wasted, so far as positive results go, should make us doubly cautious in accepting a new and somewhat similar procedure until opportunity has been afforded for its verification under conditions favorable for scientific control

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[1] Hektoen Ludvig Vaccine Treatment The Journal A. M A this issue p 1591

FACTORS CONCERNED IN WATER PURIFICATION

The amount of water needed by large communities for varied purposes is decidedly greater than is suspected by those not familiar with the problems of municipal water supplies The estimates made in different cities to meet all legitimate requirements place the quantity at not less than 750 quarts a head, daily A large part of this is, of course, devoted to other than domestic purposes — to manufacturing, sprinkling and fire protection, for example Such water would not necessarily be expected to have the same degree of purity as that required for household uses and drinking purposes As usually it is not convenient or practicable to have separate supplies for the specific needs in the present stage of water supply management, the source of supply must generally be considered as a single problem The surface area that is necessary in order to furnish a supply sufficient for a large city is correspondingly enormous

As a result of these conditions, not infrequently watersheds which provide the larger supplies cross the borders of individual states The problems of pollution thus become complicated by the intricacies of interstate relations, which are frequently the subject of legal and political disagreement An exceptionally prominent instance is afforded in the case of the city of Washington This is outside the jurisdiction of the surrounding states It derives its water supply from the Potomac River, which drains an area extending into several states The city discharges its sewage products ultimately into the same stream, which, in turn, is the source of edible shellfish that can carry infection A comprehensive examination of the sanitary problems of the Potomac River, therefore, has features of widespread importance It involves the question of pollution, direct or indirect, of navigable waters of the United States, and implicates certain sanitary features which because of their magnitude or character, are national in scope, and the solution of which devolves on the federal government

Several years ago a comprehensive study of the subject was undertaken by the U S Public Health Service This study was prompted by the publication of statements to the effect that the sewage from the city of Washington and other communities along the Potomac River polluted the waters of the lower river, producing danger of water-borne diseases, such as typhoid fever, by the eating of raw oysters taken from the oyster beds in the lower river These beds are extensive, as they may be found from Lower Cedar Point, about 65 miles below the sewer outlets of Washington, to the mouth of the river, which is about 100 miles below the outlets The District of Columbia was interested both because many of the oysters from the lower river are distributed and consumed in Washington, and because suggestions had been made that an elaborate sewage-disposal plant, to cost several million dollars, be installed for the treatment of Washington sewage Although many exhaustive studies of pollution of rivers and shellfish beds and many studies of industrial wastes have been made, few if any investigations have included the study of an entire river over a period of a year, and a still smaller number have embraced so many of the problems involved in the pollution of rivers

The coordinate effort of the federal government to collect and interpret sanitary data of the Potomac River as a whole so that the interplay of the various factors could be comprehensively understood is timely It is an appropriate extension of earlier important, though far less comprehensive, examinations of more limited questions, such as the influence of the water supply on the prevalence of typhoid fever in the District of Columbia [1]

The Hygienic Laboratory of the U S Public Health Service has now made public the results of the investigation[2] of the pollution of the Potomac River and its tributaries which was begun by the Public Health Service June 2, 1913, and continued until May 31, 1914 The investigation included a sanitary survey of the Potomac River watershed and laboratory studies of the water, mud, plankton and shellfish The sanitary survey included investigations as to the number of persons on the watershed, the prevalence and distribution of typhoid fever, the water supplies, sewage-disposal systems, and character and amounts of trade wastes

As a result of the survey, it was found that about 94 7 per cent of the population were served by public water supplies, and that a smaller proportion, 38 per cent, were served by sewage-disposal systems While typhoid fever was especially prevalent throughout the upper basin, the installation of water and sewerage systems and the increased activity of state and municipal health authorities have been followed by a decreasing typhoid rate, especially in the urban population, and the disease is now chiefly a rural one

Among the more detailed findings in the report on the Potomac problem is the evidence that at no point above Washington is the water of the Potomac River safe for use as a public water supply without reasonable treatment. Even during the period of lowest stream flow and highest temperature, the river in the area of heaviest pollution — that is, between Giesboro Point and Fort Foote — has at all times sufficient oxygen available for the sewage now discharged into the

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1 Rosenau, M J Lumsden, L L, and Kastle J H Report on the Origin and Prevalence of Typhoid Fever in the District of Columbia Bull 35, Hyg Lab U S P H S, Report No 2 on the Origin and Prevalence of Typhoid Fever in the District of Columbia Bull 44, 1907 Report No 3 on the Origin and Prevalence of Typhoid Fever in the District of Columbia, Bull 52, 1908 Lumsden, L L, and Anderson J F Report No 4 on the Origin and Prevalence of Typhoid Fever in the District of Columbia Bull 78 1909

2 Cumming, H S Investigation of the Pollution and Sanitary Conditions of the Potomac Watershed, Bull 104, Hyg Lab, U S P H S 1916

river, and enough to take care of the sewage which will probably be added for several years to come.

Oysters in the lower reaches of the Potomac River form the basis of a large and important industry. Large numbers of men gain a livelihood from this source and the product is shipped, chiefly through Washington and Baltimore, to many parts of the country. In order to protect the ultimate consumers of the oysters, and thereby protect the industry itself, it is essential that the sanitary quality of the shellfish be known, and when necessary improved and protected. The oyster beds extend from the mouth of the river about half way to the city of Washington. In the upper few miles they are used almost solely for the growth of spat, and the oysters developing here are used chiefly for planting the lower beds, and rarely reach marketable size. From data on pollution and purification of the river, detailed in the preceding sections, it is evident that by the time the water reaches the area of the oyster beds it has undergone its maximum purification. Although during the winter months the increased stream flow shortens the time during which purifying agencies may act, any anticipated danger of pollution of shellfish from this cause will be shown to be without foundation. It is gratifying to learn that in an examination of oysters from all the beds in the whole river and its tributaries, extending over an entire season, no dangerously polluted oysters were found in the Potomac River proper. The very few polluted samples found came from localities from which few oysters are shipped.

The government bacteriologists have pointed out that the factors concerned in the purification of streams as it occurs in Nature are many, but are reducible on analysis to two main elements — the dying off of the bacteria of pollution and the oxidation of the organic constituents. All agencies of purification require time for their action, and in flowing streams it is important to appreciate the fact that it is the distance in time between successive points of observation and not the distance in miles which is significant. Moreover, the death rates of bacteria in water and the rapidity of oxidation are influenced by the temperature.

The report of the Hygienic Laboratory concludes that notwithstanding the especially favorable natural conditions attending the present disposal by dilution of the sewage of the District of Columbia, it is inevitable that, in consequence of a continued increase in the population of the District of Columbia, the capacity of the river to dispose of sewage without nuisance or danger will eventually be overtaxed. It is desirable, therefore, that primary treatment works should be installed in the near future sufficient to clarify the sewage up to the limits to which plain sedimentation may advantageously be carried. The cost of construction and operation of these treatment works would not be such as to be prohibitive when considered in connection with the benefits to be derived. They should be so designed as to work in harmony with the favorable conditions locally afforded by Nature for sewage disposal. These works should be sufficient to maintain a reasonable constant as to the amount of organic matter dependent on the river for purification. Their construction is also desirable in recognition of the advancing standards as to hygienic cleanliness of river waters, as well as for the example in such matters which should be afforded by the national capital.

STRAY DOGS, THE PUBLIC HEALTH AND PUBLIC DUTY

The association of rabies with the presence of our canine population was one of the first experiences which brought home the possible necessity of paying some attention to the uncurbed liberty of this loved and hated domestic animal. Rabies appears as an easily preventable disease when one recalls that such a minor restraint on the dog as muzzling was sufficient to eradicate it from England. By rigid enforcement of muzzling ordinances, rabies has also been practically or completely eradicated from the Scandinavian countries.

Although the foregoing feature of danger and the possibility of relief are at length rapidly being appreciated in the United States, it is not equally understood that the dog may also be of major importance as a carrier of parasites dangerous to man and the domestic animals. A zoologist in the Bureau of Animal Industry[1] has compiled the list of important diseases and parasites which are conveyed by the dog to man and the domestic animals, and which are present in this country: rabies in man and stock, hydatid in man and stock, gid in stock (and possibly also in man), muscular cysticercosis, or so-called "measles," in sheep, muscular cysticercosis, or "measles," in reindeer, cysticercosis of the liver and mesenteries in stock, tapeworm in man, especially in children, roundworm in man, tongueworm in man and stock, and fleas and ticks which transfer from dog to man and which may in this way transmit disease and parasites. Furthermore, in the recent outbreak of foot-and-mouth disease, it was determined beyond any reasonable doubt that dogs were responsible in some instances for the spread of the disease, not only from one farm to another, but also from one state to another.

It is unnecessary to elaborate the details of the harmful results here indicated as a possible outcome of the unrestrained wanderings of "man's faithful servant." We must not let either a maudlin sentiment or an unwholesome indifference blind us to the duty of modern communities and the rights of their citizens to live amid a minimum of preventable menaces to health and happiness The family dog, properly restrained and kept where he will not even become a potential danger to the other members of society, needs no severe indictment at this time But the case against the unrestricted, vagrant, ownerless stray dog is based, says Dr Hall,[1] on two counts — that he is a nuisance and that he is dangerous Speaking with the authority of expert knowledge, Hall adds that the stray dog which recognizes no owner must be eliminated The irresponsible dog, with no owner to care for him, to look after his health as it concerns the dog and other animals and man, and to restrain him and stand sponsor for his acts and especially the damage he may do, does not fit into a scheme of civilization which is based on law and the responsibility of individuals for themselves and others Of course, a little serious consideration of the actual hygienic value of a restriction of the dog's unwarranted liberty must suffice to convince any thoughtful person Usually, however, no reform in established customs can make great headway without a vigorous campaign of education to justify it Are we not ready for this? Need we hesitate to agree with the government experts that "the time seems to be at hand when the stray dog, the sheep-killing cur, the vagrant carrier of dangerous parasites and of the horrors of rabies should be exterminated? The destruction of such dogs would mean a saving of hundreds of lives and the saving and making of millions of dollars" Let us believe that this is not an age of indifference

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[1] Hall, M. C.: The Dog as a Carrier of Parasites and Disease, Bull. 260, U. S. Dept. Agric., Nov. 23, 1915.

Current Comment

CENSUS BUREAU LIFE TABLES

The Bureau of the Census of the Department of Commerce is about to publish a set of life tables for the United States compiled by Prof James W Glover of the University of Michigan These tables are unique in that they deal with the whole population of the region covered instead of being, as are the actuary tables of insurance companies, restricted to selected lives Death rates and the expectation of life are shown, at all ages, for the population of the original death registration states, namely, the six New England states, New York, New Jersey, Indiana and Michigan The basis of computation is the population as shown by the census of 1910 and the mortality for the years 1909, 1910 and 1911 Examination of these tables brings out, once more, the familiar fact of the greater longevity of women It is shown that, taking all races together, the expectation of life of a female at birth is more than three and one-half years greater than that of a male This difference persists throughout life, and in the case of native white persons, up to the age of 94 The death rate in the first year of life is more than 20 per cent higher among native white boys than among girls Of equal importance and interest are the figures for infantile mortality, 5 per cent of native white boys and 4 per cent of girls die in the first month, 12 6 of the former and 10 5 of the latter during the first year This high rate falls for both sexes to a minimum about the twelfth year, after which it again rises gradually The relatively lower mortality among rural residents is strikingly brought out by these tables The expectation for white males at birth in rural localities is 7 7 years greater than in cities At the age of 39 there is still a margin of five years in favor of the country Thereafter the difference diminishes, but the country holds the lead until the age of 88, when the urban residents commence to have slightly the advantage These few figures have been extracted to illustrate the nature of these remarkable tables The bulletin in which they are published contains sixty-five pages of information of direct interest and utility to the physician, and is offered by the government to the medical profession gratuitously[1] These tables are intended primarily to be of service as a source of information to the public They should be particularly useful to public health officials, students of vital statistics, physicians, sociologists, actuaries, statisticians and others interested in the improvement of the public health of the nation Their uses for legal purposes, valuation of reversions, annuities, retirement funds and old age pensions are obvious

KIDNEY METABOLISM IN NEPHRITIS

The ultimate source of the work done in the process of secretion by glandular tissues lies in the chemical energy utilized in the cellular functions It is not an easy task to estimate this change in a quantitative way The energy at the disposal of the cells is derived from the oxidation of complex organic compounds to products of low chemical potential value, such as carbon dioxid and water Oxygen is requisite for the continuance of such activities, and the measurement of oxygen consumption by a gland gives some indication of the nature and extent of its cellular reactions The expenditure of energy required for a particular sort of activity can be determined indirectly by measuring the difference between the oxygen consumption of the resting and the active organ under investigation Most of our knowledge in this field is due to the work of the English physiologist Barcroft and his co-workers Their measurements consisted essentially in determining the oxygen content of the arterial blood supplied to this organ, and the oxygen content of that leaving it by the vein, together with the amount of blood passing in a given time In a study of the gaseous metabolism of the kidney, Barcroft and Brodie[2] found that, taking all the experiments together, the output of carbon dioxid was equivalent to that of the oxygen taken in The respiratory quotient, CO_2/O_2, is therefore practically unity, as it would be from the oxidation of carbohydrate alone This result supports the belief that the substance oxidized in the functioning kidney is of a carbohydrate nature and that it is completely oxidized in the processes connected with secretion It is not unlikely that glucose is here concerned Recently the known facts regarding the vascular and metabolic conditions in the kidneys have been extended by an investigation of the oxygen consumption in nephritis of the type induced in rabbits by uranium salts[3] In these cases the histologic examination of the kidneys showed that the spaces round the glomeruli were much enlarged, the glomeruli themselves being shrunk There was some breakdown of the convoluted tubules, the other parts of the tubules being unimpaired The blood vessels contained an abnormal quantity of blood, the corpuscles in many cases forming a lining to the vessels In spite of this fact the blood flow was if anything faster than in the normal rabbits, the oxygen consumption was lower (0 046 c c per gram per minute as compared with 0 082 c c), and the venous blood emerging from the kidney was markedly redder The evidence thus obtained in the domain of cellular metabolism corroborates the known facts regarding the lessened work of the nephritic kidney as judged by quite different criteria

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[1] A copy may be obtained on application in writing to Mr Samuel L Rogers, director, Bureau of the Census Washington D C

[2] Barcroft, Joseph, and Brodie, T G The Gaseous Metabolism of the Kidney, Jour Physiol, 1905, xxxiii, 52

THE TYPHOID RATE IN PITTSBURGH

Owing to a misstatement in the number of deaths originally reported to us by the office of the Department of Public Health, Pittsburgh, the rate for this city for 1915 appeared in our recent summary as much higher than was actually the case The number of deaths as first reported to us was 159 The actual number, as given to us this week in a letter from Dr Edwards, director of the Pittsburgh Department of Health, was 59 The rate should consequently be 10 3 instead of 24 7 This correction raises Pittsburgh from ninth to seventh place in Group 1, and marks the lowest point reached in the history of the city Although this error was not made in The Journal office, we are glad to give special publicity to the excellent record made by Pittsburgh in 1915 The corrections in other averages, made necessary by the newer return from Pittsburgh, will be made *in our* next summary

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[3] Tribe, E. M and Barcroft, J The Vascular and Metabolic Conditions of the Normal Kidney in Rabbits, Jour Physiol Proc Physiol Soc Jan 22 1916 p x. Tribe, E. M Hopkins F G and Barcroft J Vascular and Metabolic Conditions in Kidneys of Rabbits Injected with Uranium Acetate ibid p xi Tribe E M Harvey, W H and Barcroft, J Vascular and Metabolic Conditions in Kidneys of Rabbits Injected with Diphtheria Toxin, ibid p xii

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Death Rates—It should not be understood, however, that the death rate *from the infectious* diseases *is* a measure of individual, so much as of community, intelligence In this country the wonderful reduction in the death rate from infectious diseases in the past fifteen years has been confined largely to the great cities Smaller cities, villages and rural communities have *improved* but little The larger cities are establishing effective health departments Building regulations prevent the construction of unsanitary houses, either public or private. Schoolchildren are inspected by competent medical men and first cases are detected and isolated Proper hospitals for the infectious diseases are provided and scientifically administered The children of the poorest and most ignorant go to sanitary school buildings and when infected, are scientifically treated The health officer of the smaller city is a joke and that of villages and *rural communities* exists, for the most part, only in name—Vaughan

Medical News

(Physicians will confer a favor by sending for this department items of news of more or less general interest such as relate to society activities, new hospitals, education, public health, etc)

ARKANSAS

Eradication of Malaria—Two communities in the state, one urban and one rural, namely, Crossett, Ashley County and a district in Chicot County, including the Red Leaf plantation, have been selected as sites for the model demonstration areas for the control and eradication of malaria under plans outlined by Surg Rudolph H von Ezdorf, U S P H S The work will be along the lines of drainage, screening and the eradication of mosquitoes The supervision will be maintained for two years and it is expected to demonstrate that malaria can be eradicated by making each of the test communities 100 per cent proof against malaria

State Society Meeting—The fortieth annual meeting of the Arkansas Medical Society was held in Texarkana, May 2 to 4, and the following officers were elected president, Dr Merriman L Norwood Lockesburg, vice presidents, Drs James M Lemons, Pine Bluff, W A Purifoy, Chidester, and William R Brooksher, Fort Smith, secretary, Dr Clinton P Meriwether, Little Rock (reelected), treasurer and editor of the *Journal of the Arkansas Medical Society,* Dr William R Bathurst, Little Rock (reelected), councilors, second district, Dr Joseph C Cleveland, Bald Knob, fourth district, Dr William Breathwit, Pine Bluff, sixth district, Dr John H Weaver, Hope, eighth district, Dr Earle H Hunt, Clarksville, and tenth district, Dr Joseph T Clegg, Siloam Springs (reelected), delegate to the American Medical Association, Dr Clinton P Meriwether, and alternate, Dr Robert Caldwell both of Little Rock. Little Rock was selected as the place of meeting for 1917

Free Clinic at Hot Springs—Through the efforts of Dr Loyd Thompson of Hot Springs and Dr William P Parks, superintendent of the United States Hot Springs Reservation, a free clinic has been established at the government free bath house The purposes of this clinic are to furnish free medical aid to the indigent patrons of the government free bath house, to study the clinical efficacy of the waters of the Hot Springs and to exclude from the bath house cases which might menace the safety of its patrons The following clinics will be maintained for the present medical, dermatologic and syphilis genito-urinary and neurologic The medical clinic will be under the direction of Drs William H Deaderick and John M Proctor, the dermatologic and syphilis clinic under the direction of Dr Loyd Thompson the genito-urinary clinic under the direction of Drs Edward H Martin and Ernest A Purdum, and the neurologic clinic under the direction of Dr James L Greene Assistants to the various clinics will be chosen from among the physicians of the city Dr William H Deaderick was elected chief of *the clinic and Dr Loyd Thompson, secretary*

DISTRICT OF COLUMBIA

Washington's Baby Week.—Baby Week was scheduled to close on May 13, but to meet a popular demand the exhibit was kept open on Sunday May 14, and ministers, physicians and others delivered addresses there on that day A novel feature of Baby Week as celebrated in Washington was a portable exhibit in charge of a trained *nurse, used for demonstrations in various* parts of the city This served not only to instruct those who saw it but also to interest them and their friends and acquaintances in the Baby Week *exercises generally*

ILLINOIS

State Laboratory Branch Opened—A new branch laboratory of the state board of health was opened, May 15, at Champaign under the charge of Dr F S Sperry The new laboratory is to be known as the East State Laboratory

Personal.—The Crane Company of Chicago is making extensive improvements at its sanatorium, Buffalo Rock. Dr Andrew M Harvey, Chicago, is in active charge and has taken up a plan with the company for the housing of women and children and families Heretofore, provision has been made only for men——Dr John T Montgomery Charleston, formerly a trustee of the State University, is reported to be critically ill as the result of a fall

Chicago

Tuberculosis Sanatorium Changes—Dr Martin I Marshak has resigned from the staff to become superintendent of the Jewish Consumptive Relief Society Sanatorium, Edgewater, Colo, Dr Francis F Callahan has accepted a position on the staff of the Sea View Hospital, New York, Dr Arthur G Compton is now a member of the staff of the Washington (D C) Consumptive Hospital, and Dr Robert G Allison has notified the directors that he will leave in a few days to become superintendent of the Pokegema Sanatorium near St Paul——Dr John W Coon will, it is understood, build and manage a private tuberculosis sanatorium in the lake region of Waukesha County, Wis

INDIANA

Health Conference—The twenty-second annual conference of health officers of Indiana was held in Indianapolis, May 2 and 3, with an attendance of about 300

County Tuberculosis Hospital—Bids were opened, May 2, for the construction of a tuberculosis hospital for Marion County, near Oaklandon The contracts apply to the erection of an administration building with two lateral wings, one for male and one for female patients, the two wings to accommodate eighty patients The bids for the general construction varied from $55,183 to $66,469

Personal—Dr Charles P Emerson, dean of the Medical Department of Indiana University, delivered an address before the Saturday Lunch Club of the Indianapolis Chamber of Commerce, March 6, on "The Physician's Duty to the Community"——Dr Walter H Baker, South Bend, who has been ill with septicemia due to an infected wound of the hand, is reported to be improving——Dr Bernard J Larkin has been retained by the Indianapolis Board of Health to investigate conditions in factories and too closely populated districts for sources of trachoma

IOWA

Hospital News—The Serving Sisters of the Holy Ghost of Techny, Ill, have begun the erection of a new hospital at New Hampton The building will be fireproof and modern, and will represent an outlay of about $75,000——The new Marengo Hospital opened to receive patients, May 1, under the charge of Drs Erie N Brown and Ira N Crow, Marengo, and Charles A Manahan, Brownsdale, Minn——The State Board of Education has authorized that work be begun as soon as possible on a hospital building to be erected at the Iowa State College Ames The structure was authorized by the last general assembly, and will cost about $35,000

Personal—Dr Charles W Ellyson, Alta, has disposed of his practice to Dr David A Herron of Comfrey, Minn, and, after taking a postgraduate course, will locate in Waterloo——Dr William A Stoecks, Davenport, has been appointed city physician——Dr Harris A Newell, assistant surgeon of the Iowa Soldiers' Home Hospital, Marshalltown, has resigned, becoming effective May 1——Dr Alfred O Williams, Ottumwa, was given a dinner by the Wapello County Medical Society in appreciation of his forty years of service as a physician in Ottumwa Dr Williams was presented with a silver loving cup——Dr Mary K Heard has resigned her position in the eye, ear, nose and throat department of the university, to devote her entire time to practice in Iowa City——Dr Clifford L Bartlett, instructor in pathology and bacteriology in the University of Iowa, Iowa City, has resigned and accepted a position as bacteriologist in a hospital in Clinton

State Society Meeting—The sixty-fifth annual meeting of the Iowa State Medical Society was held in Davenport, May 10 to 12, under the presidency of Dr William B Small, Waterloo On Wednesday evening an address on "Cardiac Pain" was delivered by Dr Alexander Lambert, New York The oration on surgery was delivered by Dr Henry H Clark, McGregor, and that on medicine by Dr Edward T Edgerly, Ottumwa Dr J Rilus Eastman, Indianapolis, delivered the address on surgery, his subject being "The Alimentary Drainage Scheme in Man" The following officers were elected president, Dr John F Herrick, Ottumwa, president-elect, Dr John N Warren, Sioux City, vice presidents, Drs Charles B Taylor, What Cheer, and Clyde A Boice, Washington, secretary (to fill the vacancy caused by the resignation of Dr James W Osborn, Des Moines), Dr Tom B Throckmorton, Des Moines, councilors, third district, Dr William A Rohlf, Waverly, seventh district (to fill vacancy caused by death of Dr Corwin S Cornell, Knoxville), Dr Channing G Smith, Granger, and tenth district, Dr Watson W Beam, Rolfe, trustees, Drs James W Cokenower, Des Moines, and Dr Thomas E Powers, Clarinda (to fill vacancy caused by the election of Dr Warren to the presidency), delegates to the American Medical Association, Drs Lawrence W Littig, Davenport, and M Nelson Voldeng, Woodward, and alternates, Drs Daniel H Bowen, Waukon, and J Lynn Crawford, Cedar Rapids

KANSAS

Typhoid at State Hospital—An epidemic of typhoid fever was reported, April 21, from the Osawatomie State Hospital, where twenty-five cases are said to exist The state board of health is investigating the cause of the disease

Health Officers Hold Meeting—The Kansas State Association of Public Health Officers held a meeting in Kansas City, Mo, April 26, and elected the following officers president, Dr Forrest A Kelley, Winfield, vice president, Dr Burton K Kilbourne, Minneapolis, and secretary-treasurer, Dr J Carroll Montgomery, Manhattan A committee was appointed to endeavor to secure needed public health legislation in the state

Personal—Dr Lloyd G Campbell, senior assistant surgeon at the Soldiers' Home, National Military Home, Leavenworth, has resigned, to take effect May 24, and will practice in Detroit——Dr Henry M Stewart, Hutchinson, who has been for a year at Pass Christian, Miss, has returned to Hutchinson and resumed practice——Dr Walter C Palmer, Hiawatha, has gone to Europe, where he will serve in a war hospital in France

Semicentennial of State Society—At the fiftieth annual meeting of the Kansas Medical Society, held in Topeka, May 3 to 5, the following officers were elected president Dr James W May, Kansas City, vice presidents, Drs Mervin T Sudler, Lawrence, Alfred O'Donnell, Ellsworth, and Thomas A Jones, Liberal, secretary, Dr Charles S Huffman, Columbus (reelected), treasurer, Dr Lewis H Munn, Topeka (reelected), councilors, first district, Dr Charles W Reynolds, Holton (reelected), second district, Dr Clarence C Goddard, Leavenworth (reelected), third district, Dr Hugh B Caffey, Pittsburg (reelected), fourth district, Dr O Portis Davis, Topeka (reelected), fifth district, Dr William E Currie, Sterling (reelected), sixth district, Dr Erastus S Edgerton, Wichita, succeeding Dr Archibald D Jones of the same city, seventh district, Dr Kirk P Mason, Cawker City (reelected), eighth district, Dr Howard N Moses, Salina (reelected), ninth district, Dr Chauncey S Kenney, Norton (reelected), tenth district, Dr David R Stoner, Quinter (reelected), and eleventh district, Dr John A Dillon, Larned (reelected), delegates to the American Medical Association, Drs Oliver D Walker, Salina, and William F Sawhill, Concordia The society adopted a resolution advocating the asexualization of all sexual perverts and degenerates of criminal tendencies Dr Fred H Albee, New York, delivered an address on "Bone Grafting" Dr Bransford Lewis, St Louis, gave a lantern slide review of cystoscopic methods in the diagnosis and treatment of ureteral stone and stricture and Dr George W Crile, Cleveland, spoke on "The Method and Results of Surgery of the Stomach and Intestines"

MARYLAND

Dr Winslow Honored—A testimonial bespeaking his activity and efficiency in medicine and as a teacher of medicine was presented to Dr Randolph Winslow, May 8, when he celebrated his twenty-fifth anniversary as a member of the faculty of the University of Maryland, at a complimentary dinner at the Belvedere Hotel, Baltimore

Higher Preliminary Requirement—A report from the secretary of the Maryland Board of Medical Examiners states that beginning with January, 1918, two years of college work will be required as the standard of preliminary education for all students matriculating in medical colleges recognized by that board This will apply to all graduates after Jan 1, 1922

Japanese in Baltimore—Dr Yasuo Ikeda and Dr Ginsuburo Totani, Japanese physicians, the former connected with the Imperial University at Tokyo and the latter with the Imperial University at Kioto, have arrived in Baltimore to inspect the Johns Hopkins Hospital They are on their way back to Japan after having done research work at Cambridge University, England

Personal—Dr Frederick Williams has been appointed one of the health wardens of Baltimore, to succeed Dr John F Byrne, who resigned to take up duties in the surgical and medical department of the Baltimore and Ohio Railroad——

Dr Robert J Henry, Glyndon has been appointed a justice of the peace of the Fourth District of Baltimore County —— Dr William F Clayton, Overlea, has been appointed health officer of the fourteenth district ——Dr James M H Rowland has succeeded Dr William F Lockwood as dean of the medical faculty of the University Hospital, Baltimore

Hygiene and Bath Convention—The fifth annual convention of the American Association for Promoting Hygiene and Public Baths was held, May 9, in Baltimore Among those who read papers were Dr Eleanor Keller of the Vanderbilt Clinic, New York, who spoke on the effect of baths on backward children, Dr James A Nydegger of the U S P H S, Dr Donald B Armstrong, director of the Department of Social Welfare, New York who spoke on the "Social Aspects of School Hygiene", Dr John D Blake, health commissioner of Baltimore, and Dr William Burdick, physical director of the Public Athletic League Dr Simon Baruch, president of the association, delivered his annual address and spoke on the duties of the association in regard to the furthering of hygiene and cleanliness

MASSACHUSETTS

Medical Reserve Corps for Massachusetts—An order has recently been issued by the adjutant general's office establishing a Medical Reserve Corps and specifying the conditions necessary for entrance into the Medical Corps

Milk and Baby Hygiene Association Appointments—The board of trustees of the Boston Milk and Baby Hygiene Association has appointed Dr Charles W Eliot and Dr George H Ellis members of the advisory committee, and has also appointed the following conference physicians Drs Richard S Eustis, William John Hammond H Howard Flagg, Harry L Rothblatt Williston W Barker, Harold A Gale, William W Howell, Mitchell Sisson, C R Draper, Orville R. Chadwell, James K. Wardwell and Hyman Morrison

Personal.—Dr Hugh Cabot professor of surgery in Harvard Medical School, will be the head of the third medical unit of thirteen surgeons which sails for England from New York on the *Andania,* May 20 This unit will continue the work of the second unit, which went to Europe last November ——Dr Alphonse H Pettit Lawrence has moved to Ware ——B D Roberts, a student at Harvard and specialist in the line of public health, has been appointed health officer of Oskaloosa Iowa, succeeding Dr A L Washburn, resigned ——Dr William J Gallivan Boston, has been appointed a member of the Public Health Council

Milk Plant Inspected—On invitation of the proprietors of Hood's West Lynn Milk Plant, a number of physicians inspected the plant, May 3, and after a buffet dinner, Dr John J Dowling superintendent of the Boston City Hospital, spoke on "Safeguarding the Hospital Milk Supply", Dr William H Watters, professor of pathology in Boston University, read a paper on 'The Bacteriology of Milk", Dr William C Hanson discussed 'Pasteurized Milk as a Food for Infants and Children" and then, after remarks by Dr Charles H Hood, a discussion of milk methods was opened by Drs Nathaniel P Breed, Lynn, and J Forrest Burnham, Lawrence

MICHIGAN

Laboratory Stays at Houghton—The state board of health, at a recent meeting, by a tie vote refused to reconsider the moving of the State Laboratory for the Upper Peninsula from Houghton

State Tuberculosis Survey—A special meeting of the Michigan-Oceano Medical Society was held, April 21, at Muskegon at which the topic for discussion was 'The State Tuberculosis Survey '

Sanatorium Notes—A new tuberculosis hospital unit, to cost $125,000, is to be erected by the city of Detroit The item has been approved by the Council Committee and Health Committee of the Board of Estimates ——Kalamazoo Free Tuberculosis Dispensary has been discontinued, but the work will be carried on temporarily at the offices of the society in the public library building

Personal—Dr Henry B Baker, Holland, for many years secretary of the state board of health, delivered an address before the Civics Study Club, Detroit May 4, on 'Early Health Work in Michigan"——Dr Angus McLean has been elected vice president of the Detroit Board of Health —— Dr William A Wilson, Detroit, has resigned as medical superintendent of the Florence Crittenton Home, after nineteen years of service with that institution

Mental Clinic—A clinic for the examination and investigation of mental diseases was held in the Court House of Grand Rapids, May 8, by Dr Herman Ostrander, superintendent of the Kalamazoo State Hospital, and members of his staff —— The fourth of the series of outclinics conducted by members of the medical staff of the Kalamazoo State Hospital was held in the Juvenile Court room of the Kalamazoo County building, April 12

MINNESOTA

Personal—Dr Alonzo T Conley, Cannon Falls, is reported to be critically ill as the result of a cerebral hemorrhage —— Dr Herbert L Hulburd, Morris, is reported to be seriously ill at his home with septicemia due to an infected wound of the finger

Health Survey—Surg George B Young, U S P H S., has begun the sanitary survey of Minneapolis, which will be continued throughout May The work will have to do chiefly with the control of contagious diseases and the safeguarding of the milk supply of the city

Sanatorium Items—Application has been made by the Ottertail County Sanatorium Board to the State Advisory Commission for authority to increase its charge of fees from $10 to $15 a week ——The State Board of Control has asked for an additional building, to cost $75 000, at the State Hospital, Fergus Falls, for male tuberculosis patients ——The county boards of Marshall, Pennington and Roseau counties have passed resolutions providing for the erection of a tricounty tuberculosis sanatorium at Thief River Falls, toward the building fund of which Marshall County will contribute $10 000 and the other counties $5,000 each Drs Wilhelm S Anderson Warren, and Oscar F Mellby, Thief River Falls, are the medical members of the sanatorium commission

MISSOURI

Hospital Notes—Petitions have been presented to the court of Greene County bearing the names of voters who are in favor of calling a special bond election for the erection of a tuberculosis hospital in Springfield

Site for Tuberculosis Hospital Selected—The site offered by J A Dougherty, Carterville, for a tuberculosis hospital at Jasper County has been accepted by the County Tuberculosis Hospital Commission The site is 6 miles from Joplin and a mile north of Webb City The hospital is expected to cost about $80,000

Hospital Dedicated—The Christian Church Hospital, located at Twenty-Seventh Street and the Paseo, Kansas City, was formally dedicated, April 9 The building, equipment and furnishings have cost about $330 000 and there is already an endowment of $150,000 Dr Jabez N Jackson delivered an address on behalf of the staff

Personal—Dr Earl H Welcome has been appointed city physician of Joplin ——Dr J Frank Harrison has been elected mayor of Mexico ——Dr Edgar A Dulin has been reelected mayor of Nevada ——Dr John W Perkins, Kansas City, is reported to be ill at the University Hospital ——Dr Lake Brewer has been appointed city physician of Ridgeway ——Dr Charles E McBride, city physician at Webb City for eight years, has resigned ——Dr Thomas C Unthank has been appointed assistant superintendent in charge of the negro hospital, Kansas City, succeeding Dr William J Thompkins

State Association Meeting—The fifty-ninth annual meeting of the Missouri State Medical Association was held at Excelsior Springs, May 8 to 10 The second "Health Sunday' conducted by the association was observed May 7, when the pastors of the churches at Excelsior Springs opened their pulpits for members of the medical association to deliver lectures on health topics The following program was carried out

Presbyterian Church 11 00 a m speaker, George H Hoxie M D Kansas City subject Keeping the Body Under

Presbyterian Church 8 00 p m speaker Mazyck P Ravenel M D Columbia subject Prevention Better Than Cure.

First Baptist Church 11 00 a m speaker, William F Kuhn M D Kansas City subject The Relation of Heredity to Health

First Baptist Church 8 00 p m speaker Jabez N Jackson M D Kansas City subject The Preservation of Health

Christian Church 8 00 p m speaker Charles R. Woodson M D St Joseph subject Protection of the Nervous System of the Young

Methodist Church, 11 00 a m speaker Jacob J Singer M D St Louis subject The Tuberculosis Problem

Methodist Church 8 00 p m, speaker Nimrod P Wood, M D Independence subject Better Living

Christian Union Church 8 00 p m speaker Thomas F Lockwood M D, Butler subject Maternal Impressions and Other Health Items the Public Should Know

A memorial meeting for members who had died since the last annual meeting of the association was held on the evening of May 8 Among the deceased members were two ex-presidents, Drs Frank J Lutz and Walter B Dorsett, both of St Louis The following officers were elected president, Dr J Franklin Welch, Salisbury, first vice president, Drs Thomas B M Craig, Nevada, Reuben Barney, Chillicothe, Roger W Gay, Ironton, Thomas Chowning, Hannibal, Thomas N Bogart, Excelsior Springs, councilors, first district, Dr Eugene L Crowson, Pickering, tenth district, Dr Edward S Smith, Macon, fourteenth district, Dr Caius T Ryland, Lexington, sixteenth district, Dr Edward N Chastain, Butler, nineteenth district, Dr Stephen V Bedford, Jefferson City, twentieth district, Dr Albert H Hamel, St Louis, and delegates to the American Medical Association, Drs Wilson J Ferguson, Sedalia, Henry L Reid, Charleston, William J Frick, Kansas City An appropriation of $1,500 was voted for the use of the defense committee and an additional $1,500 was placed in the sinking fund, which now amounts to $2,500 The attendance was 499 The next meeting will be held in Springfield

St. Louis

Dyer in St Louis—At the meeting of the St Louis Medical Society, April 15, the guest of honor was Dr Isadore Dyer, New Orleans, who described "Some Interesting Dermatologic Cases" with lantern slide illustrations

Personal—Dr Malvern B Clopton has returned after service with the American Ambulance, Paris——Dr Frederick C Brooks, for five years medical director of the Employes Mutual Aid Association of the Stix, Baer and Fuller Dry Goods Company, was given a dinner, April 25, by fifty-five members of the association on the occasion of his retirement

Military Medicine—A series of lectures on military medicine under the auspices of the St Louis Medical Society was inaugurated, May 11, when Lieut -Col Thomas U Raymond, M C, U S Army, spoke on "The Military General Hospital", Lieut William A Hardaway, M R C, U S Army, presided May 18, Maj James M Kennedy, M C, U S Army, spoke on "Medical Service in Campaigns, Including Field Hospitals and Sanitation", May 25, Capt Frank N Chilton, M C, U S Army, will speak on "Medical Service in the Tropics", on June 1, Lieut -Col Thomas U Raymond, M C, U S Army, will discuss "The Medical Supply of an Army", June 8, Capt Will L Pyles, M C, U S Army, will consider "The Food and Water Supply of an Army and the Disposition of Waste at Camp", June 15, Capt Charles E Freeman, M C, U S Army, will review from a military standpoint "Preventable Diseases, Including Venereal Diseases, Alcoholism and Other Drug Habits," and on June 22, Maj James M Kennedy, M C, U S Army, will deliver the final lecture of the series on "The Recruitment of an Army and the Relation of the Medical Department to it, Including Moral, Mental and Physical Training of a Soldier, and the Relation of Clothing and Equipment to the Efficiency of a Soldier"

NEBRASKA

State Association to Meet—The annual meeting of the Nebraska State Medical Association will be held at Omaha, May 23 to 25, under the presidency of Dr Edward W Rowe, Lincoln, with headquarters at the Hotel Fontenelle

Hospital News—Bids have been asked by the board of control for the construction of a new three-story building at the Norfolk State Hospital, to accommodate 100 patients The plans include a large enclosed porch on each floor——The new hospital recently built at Wayne by Dr Anson S Lutgen was opened for inspection, April 7 and 8

Personal—Dr Robert Retzer, dean of the Creighton University Medical College, Omaha, has resigned——Dr George E Charlton, Ingleside, for many years second assistant physician at the Ingleside State Hospital, has been appointed superintendent of the Norfolk State Hospital, succeeding Dr William D Guttery

NEW YORK

Sanitary Officers to Meet—Saratoga Springs has been selected as the place for the 1916 convention of the New York State Sanitary Officers Association, which will meet in June under the presidency of Dr Montgomery E Leary, Rochester

New York City

Honor to Pilcher—The celebration of the semicentennial of the entrance into the professional field of Dr Lewis Stephen Pilcher, Brooklyn, continued from May 11 to 13 On these days surgical clinics were given in all the principal hospitals of the burough May 12, a banquet and reception was tendered Dr Pilcher by his associates and friends in the medical profession, in club life and in Grand Army circles

Red Cross Hospitals—The New York County branch of the American Red Cross, which has been working for some time for funds to establish three military base hospitals in this city, announces that gifts amounting to $50,000 have been received and that orders have been placed for the equipment of two base hospitals, of 500 beds each Efforts are now being made to obtain funds for the equipment of the third hospital Three full staffs of surgeons, nurses and orderlies have been organized for these hospitals under the direction of Dr George E Brewer, Dr George D Stewart and Dr Charles L Gibson

How to Feed the Family—This is the title of a little booklet published under the auspices of the Public Health Education Bureau of the Department of Health It presents a list of foods and the recipes for their preparation which will provide sufficient food for a family of five at a cost of $7 31 per week Careful attention has been given to the proper balance of the different food elements and the list has been tested practically for about two years by the Social Service Department of the Beth Israel Hospital The health department is desirous of spreading this knowledge since they find that many instances of malnutrition encountered in the clinics are due to ignorance as to what constitutes a proper diet

Dr Jacobi's Birthday—Dr Abraham Jacobi celebrated his eighty-sixth birthday anniversary, May 6 A dinner was given in his honor at the Ritz-Carlton by the board of directors of the Hospital for Deformities and Joint Diseases in which Dr Jacobi has taken great interest from its start in 1907 Contributions of $112,000 were received toward the $1,000,000 fund for the institution Dr Jacobi was presented with a gold-handled cane on behalf of the board of directors by Paul M Herzog May 6, Dr Jacobi was the guest of honor at a testimonial dinner given by the New York Yacht Club at which were present more than twenty physicians who have acted as his assistant in the hospital and college in which he has worked

Baby Week.—The week of May 6 to 12 was Baby Week in this city and in this connection infant mortality studies have been made by Registrar Guilfoy of the department of health which reveal the very remarkable fact that the death rate from congenital defects is greater among babies of the rich than among babies of the poor The infant mortality rate for the whole city, based on 141,256 births reported during the year, was 98 per 1,000 In several of the better districts of the city only 25 to 50 per 100 die in the first year of life, while in a district inhabited largely by negroes and Italians, 314 babies out of every 1,000 died during the first year of life The death rate from infectious and diarrheal diseases in nearly all the so-called well-to-do districts is far below the average for the city In all districts where the colored population represented at least 10 per cent of the entire population the rates varied from 124 to 314 per 1,000 The reason for the preponderance of deaths from congenital causes among the well-to-do is to be further studied Dr Bolduan has suggested that the later age at which people of this class marry may prove to be the deciding factor

OKLAHOMA

Inspection of Schoolchildren—The state board of health has recently examined 4,000 schoolchildren in Kiowa, Roger Mills and Washita counties and has found that 15 per cent have defective sight, 12 per cent defective hearing, 25 per cent nasal trouble, and 35 per cent defective teeth

Personal—Dr Walter Penquite, Chickasha, is spending the spring in San Angelo, Texas, on account of his health——Dr Edwin W Van Brunt, Watonga, has been appointed health officer of Blaine County——Dr Charles W Bacon, Yale, fractured both bones of the right forearm while cranking his automobile recently——Dr McDonald Looney, Burneyville, who was recently injured by the falling of a horse which he was riding, is convalescent

PENNSYLVANIA

Insane Patients to Pay—Reversing the Delaware County Court in three lunatic support cases, Justice Potter of the Supreme Court filed opinions clearing the way for the state to obtain reimbursement of thousands of dollars for the support and maintenance in the state hospitals of mentally afflicted persons who were admitted as 'indigent" but who had estates at the time or who received inheritances subsequently

Personal.—Dr Milton C Dunnick, Shrewsbury, is convalescent after an operation for appendicitis which he underwent recently at the West Side Sanitarium York——Dr George W Harrington, Hazleton, was seriously injured by a fall down stairs, May 2——Dr D E Sable, chief of police and fire surgeon of Pittsburgh, was seized with appendicitis, May 4, and removed to the South Side Hospital where operation was performed——Dr Malcolm C Grow, Media arrived in New York, May 11, after four months' service as surgeon with the Russian army Dr Grow has been decorated with the Cross of St George for bravery and intends to spend seven weeks in this country, and to purchase medical supplies before returning——Dr Louis J Burns Philadelphia has been appointed laryngologist to St Mary's Hospital——Dr James M Torrance of the Hospital for Contagious Diseases has been appointed second assistant physician of that institution——Dr Krusen of the Department of Health and Charities has announced three appointments Dr Robert G Torrey to succeed Dr William Pepper as visiting physician to the Philadelphia General Hospital, Dr E. J G Beardsley as visiting physician to the Tuberculosis Department of the Philadelphia General Hospital, and Dr Theodore T Melnick to be intern at the Philadelphia Hospital for Contagious Diseases

Philadelphia

Hospital Items—A $75000 Lincoln Memorial Building is planned for the Mercy Hospital——The Friends' Hospital Frankford is turning over 900 acres of woodland at Fox Chase to the State Forestry Department as a Forest Reserve The hospital managers will plant 16,000 trees this year, the state furnishing the saplings

Health Education Experiment—Health Director Krusen has announced that an experimental health district is to be established in South Philadelphia so that the plan of health education may be given a thorough trial under municipal direction The district will be under the supervision of Dr Krusen and his assistants and the work to be done will be the intensive education of the people in matters of health and hygiene

Today and Tomorrow Exhibit—The West Philadelphia Hospital for Women the only one west of the Schuylkill River which is operated exclusively for women will have an exhibit at the Philadelphia Today and Tomorrow Exhibition held in the Commercial Museum Building May 15 to June 10, showing the maternity work done in 1889, when the hospital started and what is being done today by its staff of women physicians The hospital has just broken ground for a new $75000 Maternity Building in connection with its present equipment

Conference of Teachers of Blind—A two-days conference of teachers of the blind was held, May 11 and 12 under the auspices of the Pennsylvania Institution for the Instruction of the Blind Members from Delaware, New Jersey and Maryland were present The majority of the teachers themselves were sightless The conference proceedings were in charge of Mr Maloney, of the Pittsburgh Institute for the Blind and Dr L Webster Fox, of Philadelphia, president of the society The problem of what to do with children of the Twilight Zone" was discussed, as education of blind children in public schools is not compulsory and the many children who can see a little have no means of getting an education for the Pennsylvania schools for the blind do not take children who have more than one tenth of the normal vision owing to the lack of room

SOUTH DAKOTA

State Medical Society Meeting—The annual meeting of the South Dakota State Medical Association will be held in Aberdeen May 23 to 25 under the presidency of Dr James B Vaughn, Castlewood, with headquarters at the Elk s Club

Honor State Hospital Superintendent.—In honor of the twenty-fifth anniversary of the superintendency of Dr Leonard C Mead of the State Hospital for the Insane, Yankton, 120 members of the Eighth District Medical Society and other guests assembled at a banquet in the new women s building of the hospital to pay tribute to Dr Mead A number of eulogistic addresses were delivered and a handsome loving cup was presented by the society to Dr Mead

CANADA

Hospital News.—Western University, London, Ont, is organizing a stationary hospital for overseas service Dr Edwin Seaborn is commanding officer with the rank of lieutenant-colonel Dr Clarence E Brown, London, is senior major, and Dr John Cameron, Wilson, who has just returned from France, is junior major The captains are Drs James Moriarty, Mimico, and Dr Ernest H Young, Kingston

University of Toronto Base Hospital—The report that this hospital was to be moved to France proves incorrect The hospital will remain at Saloniki for some time to come Its position, however, has been changed It is now on the east side of Saloniki, 10 miles from its former position, and is situated on a promontory of land with a bay on each side This hospital is said to have done magnificent work, as have the other Canadian hospitals

Personal—Col Murray MacLaren, M D St John, N B, Commanding Officer of No 1 Canadian General Hospital has been appointed deputy director of the Canadian Medical Services——Dr Walter S Verral, Vancouver, M C, has been appointed superintendent of the Toronto Orthopedic Hospital in succession to the late Dr B E Mackenzie——Capt S G Chown, Winnipeg, Man, has been appointed Advance Department Medical Officer in France——Dr G Stirling Ryerson Toronto, has resigned the presidency of the Canadian Red Cross Society

Untrained Midwives in Toronto—Dr Edmund E King, vice president of the Ontario Medical Council, and a member of the Council of the Academy of Medicine, Toronto, addressed the medical commission on behalf of these bodies recently with regard to the proposal to license midwives in Ontario Dr King told the commissioner that there were no licensed midwives in Ontario and that it was a dangerous thing for mother and babe to have an untrained woman in attendance on them He further said that untrained women did much work among the foreign population in Toronto with unfortunate results The opinion seems to prevail among practitioners in Ontario that if midwives are to be licensed that an act should be framed so as to copy the act now in force in Great Britain

GENERAL

Correction—The general superintendent of the Medical Department of the United Fruit Company writes that the obituary notice of Dr Francis T B Fest, which appeared in The Journal of April 8, was incorrect in two particulars Dr Fest had been an assistant surgeon in the service of the United Fruit Company and had resigned from the service in December 1913

Pharmacopeia Adopts Metric System.—The revised edition of the United States Pharmacopeia, now in preparation, will make exclusive use of the metric system and in order to aid in its transition, the United States Bureau of Standards has prepared a circular on weights and measures for pharmacist and physician The bureau has also furnished the committee on revision of the Pharmacopeia with definitions of the several degrees of fineness of drug powders and methods to be used in their determination

Immunologists Convene—At the third annual meeting of the American Association of Immunologists held in Washington D C May 11 and 12 under the presidency of Dr James W Jobling Nashville, Tenn, Dr Richard Weil, New York, was elected president, Dr John A Kolmer, Philadelphia, vice president, Dr Martin J Synott, Montclair, N J., secretary (reelected), Dr Willard J N Stone, Toledo, Ohio treasurer (reelected), and Drs William H Park New York, and Arthur F Coca, Flushing, L I, were elected councilors

Conference of U S Public Health Service with State Health Officers—The fourteenth annual conference of the U S Public Health Service with state and territorial health authorities was held in Washington on May 13 and 15 Representatives of twenty-three states and territories were present Among the more important topics discussed were uniformity of interstate and intrastate regulations for the prevention of the spread of communicable diseases through common carriers, the collation and use of morbidity reports, and health insurance

Throat, Nose and Ear Men Elect—At the annual meeting of the American Laryngological, Rhinological and Otological Society, held in White Sulphur Springs, W Va., May

5 and 6, under the presidency of Dr Seth M Smith, Philadelphia, the following officers were elected president, Dr Thomas J Harris, New York, vice presidents, Drs John F Culp, Harrisburg, Pa, John E Brown, Columbus, Ohio, Richmond McKinney, Memphis, Tenn, and James A Patterson, Colorado Springs, Colo, secretary, Dr William H Haskin, New York, and treasurer, Dr Ewing W Day, Pittsburgh

Conference of State and Provincial Boards of Health—The annual conference of secretaries of state and provincial boards of health was held in Washington on May 16 This is a voluntary association of the health agencies of the several states of the United States and of the provinces of Canada In that respect it differs from the annual conference of the health agencies of the states and territories with the United States Public Health Service, referred to elsewhere in this issue, which is a strictly official organization, created by the law under which the Public Health Service is now organized

Community *Experiment on Tuberculosis*—The National Association for the Study and Prevention of Tuberculosis has been presented with $100,000 by the Metropolitan Life Insurance Company to demonstrate by a community experiment, for three years, that tuberculosis can be controlled as any other infectious disease, if right methods and adequate resources are available It is planned to select a town or ty of about 5,000 inhabitants, probably in New York or Massachusetts, and to apply there all the knowledge and treatment of tuberculosis available with a view to the ultimate eradication of the disease

U S P H Service Personal—Senior Surgeon Fairfax Irwin began a month's tour of inspection of the coast guard service along the New Jersey coast on May 5——Senior Surgeon Charles E Banks has been appointed sanitary inspector and medical officer in charge of the United States Safety First special train which is now making an educational tour of the country carrying hundreds of exhibits illustrative of the methods employed by the federal government for saving human life and property, both at sea and on land——S A Surg Joseph R. Ridlon, Savannah, has been placed temporarily in charge of the work of Dr D B Moss, state bacteriologist of Alabama, Montgomery

Bequests and Donations—The following bequests and donations have recently been announced

Eaglesville (Pa) Sanatorium for Consumptives, $6,000, the receipts from a benefit performance at a Philadelphia theater, April 27

Camden (N J) Municipal Hospital, an appropriation of $8,000, by councils, for furnishing and equipment.

Philadelphia Home for Incurables, $2,000, by the will of Elizabeth M Henderson

Philadelphia Orthopedic Hospital, Presbyterian Hospital and Hospital of the University of Pennsylvania, Philadelphia, each $15 000, for the establishment of free beds in memory of Henry Davis, Mary S B Davis and Mary Davis Tenbrook, the Hospital of the University of Pennsylvania to use the income for aiding worthy students, preferably residents of Maine, Philadelphia Home for Incurables, $1,000, by the will of *Mary D Tenbrook*

Louisiana Methodist Orphanage, Ruston, a donation of $5,000, by Dr Luther Sexton, New Orleans

Associated Jewish Charities of Chicago, twelve thirtieths, Alexian Brothers Hospital, Chicago, Jewish Orphan Asylum, Cleveland, German Old Peoples Home, Forest Park, Home for Jewish Friendless and Working Girls, and Chicago Home for the Friendless each one thirtieth, Chicago Home for Jewish Orphans, and Chicago Winfield Tuberculosis Sanatorium, each two thirtieths, Jewish Training School, Jewish Aid Society for Relief, and Home for Aged Jews, Chicago, each two thirtieths, of the income of the estate of Hyman Lowy, appraised at $300,000, *twenty one* years after the death of the last grandchild now alive

Presbyterian Hospital, New York, $100,000, by the will of Charles W Harkness

Massachusetts Medical Benefit Society, $1,000, and Dr John W Pratt, Dedham, $500, by the will of Virginia Carpenter, Dedham

Temple University, Philadelphia, $2,000, by the will of Adeline Winters

Hahnemann Hospital, Philadelphia, $12,000, by the will of Isabella T McQuade

Wills Eye Hospital, Philadelphia, a contingent bequest of $2,250, by the will of Eloise King

Wine of Cardui Suit—Since the publication of the last item concerning this suit (The Journal, May 13, 1916, p 1560), following the testimony of Dr Torald Sollmann, there were called to the stand for the defendant—the Association—Dr Paul N Leech, *Dr Lewis E Warren* and Dr Arthur J Cramp, who identified specimens and connected up points in the testimony for the defendant There were then introduced into evidence various exhibits for the defendant Mr E A Wheatley, advertising counsel for the Chattanooga Medicine Co, was asked concerning the billboard advertisements used by the Chattanooga Medicine Co Mr Hough admitted, on behalf of *the plaintiff*, without conceding that it was an issue in the case, that Wine of Cardui was advertised as extensively as possible There was then called to the stand Dr W S Leathers Before this witness' evidence was taken the Court intimated that it was disposed at *this point* to limit further expert evidence After some discussion, the defendants rested their case Mr Hough stated that at this stage of the trial it was proper to inquire to what extent the defendant has justified, in other words, whether any evidence has been produced *which would* justify the jury in returning a verdict The Court stated if the defendants have not justified as to everything then there is something where the jury must find a verdict Argument was made on this question and the Court finally stated that he would let the case go to the jury

There were then called as witnesses for the plaintiff up to the time of going to press, Dr Francis P Mason, chemical engineer, Dr George W Funck, Dr Francis E Thornton, Dr Albert F von Zelinski *and Dr George C Amerson*, Chicago There were also read numerous depositions from various women who had used Wine of Cardui

Medical Museums—The ninth meeting of the American Section of the International Association of Medical Museums took place at the Army Medical School, Washington, D C, May 8 Dr Aldred S Warthin, Ann Arbor, Mich, was in the chair, and the following officers were elected president, Dr Oskar Klotz, Pittsburgh, vice presidents, Drs W M Late Coplin, Philadelphia, H E Robertson, Minneapolis, and Daniel S Lamb, Washington, D C, councilors, Dr Aldred S Warthin, Ann Arbor, Mich, W M Late Coplin, Philadelphia, Howard T Karsner, Cleveland, Milton C Winternitz, Baltimore, and Robert A Lambert, New York, secretary-treasurer, Dr Maude E Abbott, Montreal, and assistant secretaries, Drs Joseph Kaufmann and William W Francis, Montreal An important discussion took place on the standardization of square glass museum jars and the problem of *obtaining a source of supply of these* under existing war conditions It was decided to simplify the problem by reducing the large number of miscellaneous sizes, now in use among museums, to from 11 to 16 sizes and a committee was appointed, consisting of Drs Klotz, Winternitz and Abbott, whose business it should be to approach local glass manufacturers on the one hand and members of the American Section of the Museums Associations on the other and thus attempt to secure a supply of the selected sizes, which it was felt *should be obtainable* in this country as soon as the large demand which exists becomes definitely formulated A fine series of exhibits was on view from the Army Medical Museum, Washington University Medical School, McGill Medical Museum, Montreal, and various members of the American Association of Pathologists and Bacteriologists This exhibiton remained open during the three days of the congress

FOREIGN

Pathologic Professorship Endowed—In the will of the late Mr Stanley Bode, who left an estate valued at about $160,000, after providing for certain legacies, the residue of the property was left in trust for his mother and sister and to the survivor of them and subject thereto, a bequest of $10,500 to Epsom College for one foundation scholarship and the ultimate residue to the University of London for the endowment of professorship in pathology in the Medical School of Charing Cross Hospital Of the property bequeathed to him by his wife, he gives, in addition to the number of legacies to her relatives, $5,000 each to the London School of Medicine for Women, the New Hospital for Women, and the pathologic department of the New Hospital for Women, and any residue to the New Hospital for Women

New American Hospital in Panama—The new buildings of the Colon Hospital have been completed and turned over to the United States medical authorities for Colon Cristobal The patients will be transferred from the old quarters this month and the old wooden *structures* will be removed The new hospital will then have an unbroken sea front and full advantage of the prevalent ocean breezes The buildings are four in number, of reinforced concrete with tile roof, arranged on the pavilion plan, with an administration building in the center, an east wing for wards and a west wing for dispensary and private rooms and a service building in the rear There are also an emergency ward, laboratories Roentgen-ray room, dark room and all other modern hospital conveniences The buildings are thoroughly screened have ample protecting verandas the entire length of the building and an enclosed sun porch at the end

Protest Against British Holding up Supplies—The chairman of the Central Committee of the American Red Cross has forwarded a letter to the secretary of state, dated May 8, in which he submits the facts that since the beginning of the present war the American Red Cross has invited contributions of money and supplies for the wounded and sick of all belligerent powers, that it has shipped to these powers the supplies contributed, that it has had no difficulty in sending such articles to the entente allies, but that since September 1915 there has been delay in granting permits by Great Britain for shipment by the American Red Cross to the central powers Since January of this year only one permit has been granted The Red Cross is now in receipt of a communication from the state department enclosing a dispatch from the British government in which it definitely withdraws its consent for the shipment of such articles by the American Red Cross and this in effect announces its purpose to treat them as contraband of war As the American Red Cross considers it to be in the interest of the humane conduct of wars that the principles of the Geneva Convention shall obtain it urges on the state department the propriety and wisdom of directing the matter again to the British government with the hope that it may change the attitude maintained by it, which appears to be based on a misconception of the attitude of the central powers in respect to Article 29 of the Declaration of London This article provides that articles serving exclusively to aid the sick and wounded shall not be treated as contraband of war

LONDON LETTER

London, May 1, 1916

The War

THE HEALTH OF THE BRITISH EXPEDITIONARY FORCE IN FRANCE

As stated in previous letters the health of the soldiers thanks to protective precautions has been remarkably good Typhoid fever which caused 8 000 deaths in South Africa has been almost absent The greatest precautions are taken against carriers, no soldier who contracts the disease is allowed to mix with others till he has satisfied the bacteriologists that he is free from the bacilli and even the civilians in the villages in the war zone are examined bacteriologically, and if found to be carriers are removed This work is done in laboratories which at first were mobile but now are stationary There are fourteen in which about 2,000 samples are examined weekly

NERVOUS DISORDERS

Nervous disorders due to the shock and strain of bombardment are conditions which cannot be affected by hygienic precautions With the modern development of big guns and high explosives, shell shock has become frequent A committee has been appointed to investigate the subject in cooperation with the leading French neurologists The cases have shown great divergence from the disorders observed in civil life When exposed to concussion of a high explosive, a variety of symptoms may be produced All consciousness of the explosion may be obliterated, or the soldier may simply become dazed and afterward his conduct may be 'curious" and his actions indeterminate For these conditions the only treatment is rest After a heavy bombardment a healthy man may break down, and if removed to a place of safety collapse and fall asleep in spite of the noise that is going on Some men then recover, but others cannot support noise for a long time They show overreaction to noise A cab whistle or an exploding tire outside a convalescent home will bring some patients from their beds In another group a condition of nervous irritability rather than exhaustion is produced Thus continuous shelling, even though it produces few casualties has a wearing down effect In men with a stable nervous system the effect is temporary but it is not so in those with neurotic tendencies Hence our neurologists who are familiar with the nervous systems of our men and our enemies predict that the imperturbable British temperament will confer an advantage in the coming struggle

THE EFFECTS OF THE WAR ON THE MEDICAL PROFESSION

The results achieved by the Central Medical War Committee of the profession in organizing a medical service for the greatly expanded new army are gratifying We have reached a stage of preparedness, and are ready for any measures the government may consider necessary Most of the physicians now remaining in civil practice are married men, and many of these have enrolled for service If a measure of compulsion should prove necessary, the profession will offer no opposition Indeed, the number of men who can thus be obtained cannot now be considerable.

DEARER DRUGS

In The Journal, Jan 29, 1916, p 368, was a table showing a great increase in the cost of drugs since the outbreak of war The following more recent list shows how many times dearer the most commonly used drugs are It contains some new items and also shows a diminution in some cases and an increase in others of the cost

NUMBER OF TIMES THE PRICES OF DRUGS HAVE INCREASED OVER THE PRICE AT OUTBREAK OF WAR

Drugs	Times	Drugs	Times
Acetanilid	11	Phenol (carbolic acid)	6
Acetphenetidin (phenacetin)	26	Potassium bromid	16
Acetylsalicylic acid	25	Potassium chlorate	7
Antipyrin	12	Potassium permanganate	27
Caffein	3½	Quinin	3
Calomel	2¼	Salicylic acid	20
Citric acid	2	Sulphonal	5
Cocain	7½	Tartaric acid	3¼
Cod liver oil	11	Thymol	3½
Cream of tartar	2	Veronal	3

The most remarkable advance is in the case of potassium permanganate, which used to be sold at the rate of 40 shillings a hundredweight Now it is quoted on the wholesale market at 10 shillings a pound, and dealers who used to traffic in ton lots are glad to pick up a few pounds here and there from retail pharmacists

THE WORK OF BRITISH ARMY SURGEONS FOR FRENCH CIVILIANS

In a previous letter, reference was made to the work done by British Army surgeons among the French civilians in the area occupied by our troops Deprived by mobilization of their ordinary medical advisers, the French population would in many cases be unable to obtain advice but for British help which is gladly and freely given and has evoked expressions of gratitude from the French authorities Moreover, a considerable amount of drugs and dressings has been supplied This service has been organized in various ways In some cases individual medical officers are told off for civilian duty in rotation a month at a time In other cases it is caused to be generally known that two will be in attendance to receive civilian patients during a specified hour of the day In not a few instances, when an epidemic of typhoid or other disease has been suspected, very vigorous sanitary work has been prosecuted over a given district, and there is no doubt that more than one epidemic has been successfully averted Besides ordinary illnesses there are, of course, casualties among civilians as a result of shelling One class of work rather foreign to their ordinary vocation, which the physicians have had regularly to do in the absence of the usual practitioners, is midwifery The gratitude for the work done is marked, cases being recorded of fees after the usual refusal to accept them, being anonymously deposited in officers' billets at night when it has been impossible to trace their origin No less pleasant, perhaps, is the fact that no official records have been kept of the work done As one officer, apologizing for not being able to give accurate figures, phrases it, "It seemed so natural to do it that it was hardly thought of" And this has been almost universal One army, indeed is able to report that the average number of civilian cases treated has been about 245 a day Another can testify to 463 major operations performed of which there would necessarily be records and estimates about 16 000 cases in all Much good work has also been done in helping the poorer sections of the people Subscriptions in special cases have been made on the spot and in other instances money has been raised for local needs by appeals in England A certain medical officer has been so active in connection with a children s hospital that he is known in the neighborhood as 'English Papa"

The Neglect of Science by the Government

At the Royal Institution H E Armstrong, the chemist, recently delivered a lecture on Organic Products Used in Medicine. In referring to the results obtained through the feverish activity of German laboratories in the production of artificial drugs he said they were based on hydrocarbon originally obtained by our Faraday as a by-product of oil gas He pointed out that benzene the foundation stone of the organic chemical industry, was discovered and defined in that institution ninety years ago Through Faraday's pioneer work the light hydrocarbons of coal tar were investigated at the College of Chemistry in 1846 Ten years later the first artificial dye was discovered and manufactured, and a perfume was also artificially made near Harrow The connection between chemical constitution and physiologic action was first brought into prominence in Edinburgh Abel developed the gun cotton industry into a stable existence in the sixties, and its application in conjunction with nitroglycerin to military purposes resulted from the work of Abel and Dewar Why, after having done so much, had we allowed ourselves to fall behind? If we were not to get what we wanted from Germany after the war, we must, as the Australian prime minister had said, attack the problem systematically and scientifically The universities and public schools placed so high a premium on classical studies that ability was attracted away from science With no regular remunerative outlet for science, few took it up, and workers found opportunity in industry The Royal Society had become ıc preserve of the academic worker, consequently it had been reduced to impotence, and no sufficient use was made of its great resources Though 999 out of every 1,000 suggestions brought before the Inventions Committee were useless, as Mr Balfour had stated, distinguished scientific men were wasting their time on such committees, and the country was misled into supposing that it was receiving the help of science The casual inventor has been considered, but not those who could give efficient assistance It was not that science was unable to help, it was simply not allowed to It was, however useless to complain of government apathy and of public ignorance as to the application of science to industry, when the body scientific itself remained unorganized Science, he feared, was losing rather than gaining ground in this country Through being ineffective collectively, science was voiceless in the councils of the nation

BERLIN LETTER

Berlin, April 18, 1916

Personal

Professor Hofmann, director of the physiologic institute at Konigsberg, has succeeded to the position held by Professor Schenck in Marburg

Prof A Wolff, director of the dermatologic clinic in Strassburg, died, aged 65 years In addition to a textbook on skin and venereal diseases, Wolff has written much on the heredity of syphilis and on gonorrhea in women

The successor to Professor Plehn, recently called to Berlin, is Professor Jurgens, formerly director of the medical division of the New Cologne city hospital

The Feeding Problem

In order to facilitate the problem of feeding the poor, several of the suburbs of Berlin have provided transportable kitchens These kitchens, popularly termed "goulash cannons" are driven through the poor parts of the cities and a good noonday meal is furnished at the rate of 35 Pfennige (8 cents) per liter (quart) This meal consists of vegetable soup cooked with potatoes and meat

The Future of Disabled Soldiers

Every effort is being made to lessen the difficulties confronting the invalid by providing suitable occupation for him and also encouraging him in taking up a homestead, thus insuring permanent citizenship The government recently proposed to the Reichstag that there be enacted a law which would make it possible to advance a certain sum of money to those injured in the war This will encourage these
persons to buy homes, and fro cal and sanitary
points of view much is to be ic wel-
fare It will make it possibl to
observe proper sanitation and
sion has repeatedly pointed o
tuberculosis, and the mortality of
homes must be provided The loan
proposes to make is available to all inv
of 21 and 55 who propose to use money
approved purpose A civil as well as a me
will be made Furthermore, such applicants w
any pensions unless their earning capacity has
ished at least 0 per cent by their invalidism T
loan will be giv to invalids who are not more than
of age Such a oan will be sixteen times greater t
war pension, that is, 2,880 marks ($720) It will dir
with age so that the invalid of 55 will receive the smallest sum, seven and one-half times the war pension Each applicant will be permitted to capitalize his field allowance and "mutilation" allowance so that a man aged 29 who has lost his right hand may be given a loan of 7,056 marks ($1,764)

Cooperation Between Chemistry and Biology

Emil Fischer, a chemist of Berlin, recently delivered an address on organic synthesis which portrayed a rather hopeful state of affairs for future cooperation between chemistry and biology His concluding remarks were as follows "Biology has profited much from the chemical examination of the purins It is known that the purin of nucleinic acid in man furnishes the material from which uric acid is made If the amount of uric acid becomes large, or if for other reasons the excretion of uric acid is interfered with, then, because of its very slight solubility, it is deposited in the joints, in the urinary bladder, kidneys, blood vessels, heart muscle, etc, and causes gout, kidney and bladder stones Such patients are today given a diet containing very little nucleoprotein, and every effort is made to administer substances which will increase the solubility of the uric acid and further its excretion from the body On the other hand, debilitated patients will be given nucleinic acid The decomposition products of nucleinic acid—sugar, purin bodies and phosphoric acid—may be produced synthetically Why not then make nucleinic acid synthetically? This has, in fact, already been done, and a sample is at hand of a synthetic nucleinic acid which is even crystallizable (theophyllinglukosidphosphorsäure) The war has stopped further research in this direction, but the work done thus far shows what can be accomplished by synthesis Other substances, doubtless, will be produced in a similar manner, and it is to be expected that before many years have elapsed the chapter on synthesis of nucleinic acid will be as extensive as that on carbohydrates, fats and purins No one will doubt that biology
will derive much benefit from these chemical r es
because they bear directly on metabolism and sin
lems Chemical synthesis is far and away ahea
in many respects e it can avail itself
One needs but t ntion to vegetable dy
alizarin, or th e odors of plants,
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Association News

THE DETROIT SESSION

Boat Trips to the Convention City

The local Committee on Arrangements calls the attention of the Fellows of the Association to the delights of a boat trip to Detroit. It is suggested that other cities follow the example of Chicago and charter passenger boats for a lake trip to Detroit, retaining the boats in Detroit as floating hotels during the meeting. It has been done on previous occasions in that city, and has helped out hotels in somewhat relieving congestion.

While the hotels of Detroit have ample accommodations for large meetings such as that of the American Medical Association, the advance reservations have poured in so rapidly that in order to insure every one satisfactory accommodations, the local committee recommends that those who enjoy a boat trip shall come to Detroit by boat and occupy their staterooms during the meeting.

Deaths

Thompson Elbridge Potter, M.D., St. Joseph, Mo.; Jefferson Medical College, 1875; aged 66; a Fellow of the American Medical Association; professor of physiology and diseases of the nervous system in Northwestern Medical College, St. Joseph; one of the founders of Central Medical College and professor of surgery and president of the institution, and on the merger of Central and Ensworth Medical Colleges in 1905, he became professor of principles and practice of surgery and secretary of Ensworth Medical College, St. Joseph; surgeon to St. Joseph's and the Ensworth hospitals; from 1882 to 1886 local surgeon of the Hannibal and St. Joseph Railroad at Cameron, Mo., and mayor of that city in 1884-1885; founder in 1880 and for several years editor of the *Western Medical and Surgical Reporter*; died at his home, April 29, from nephritis.

Frederick Townsend, M.D., Sault Ste. Marie, Mich.; New York University, New York City, 1894; aged 47; acting assistant surgeon, U. S. P. H. S.; a Fellow of the American Medical Association and American College of Surgeons; formerly professor of anatomy in the Detroit College of Medicine; assistant surgeon to the Upper Peninsula State Hospital, Newberry, and in charge of the local work of the United States Public Health Service at Sault Ste. Marie and examining surgeon for the immigration department; local surgeon for the Duluth, South Shore and Atlantic and Minneapolis, St. Paul and Sault Ste. Marie railways and the Trans-Ste. Marie Traction Company; died at his home, April 26, from pneumonia.

Amos P. Dodge, M.D., Oneida, N. Y.; University of Maryland, Baltimore, 1874; aged 62; a Fellow of the American Medical Association and once vice president of the Fifth District Branch of the Medical Society of the State of New York; a charter member of the New York and New England Association of Railway Surgeons and of the Oneida Medical Club; for four years health officer of Oneida and for thirty years division surgeon of the New York Central Lines and the West Shore system; died at the home of his daughter in Oneida, May 3.

Elbert Wing, M.D., Los Angeles; Northwestern University Medical School, 1882; aged 63; a Fellow of the American Medical Association; for several years professor of nervous diseases and medical jurisprudence in his alma mater, and attending neurologist to St. Luke's and Provident hospitals, who moved to California in 1904 on account of ill health; vice president of the Sewell-Clapp Envelope Company; died at home, May 8, from cerebral hemorrhage.

William Howard McKenzie, M.D., Newark, N. J.; College of Physicians and Surgeons in the City of New York, 1892; aged 48; a member of the Medical Society of New Jersey; physician of Essex County for more than ten years and president of the medical board of St. Barnabas' Hospital, Newark, was seized with a cerebral hemorrhage while attending a meeting of the board and died a few hours later in the institution.

Charles Frederick Osgood, M.D., Ogden, Utah; Rush Medical College, 1890; aged 48; a Fellow of the American Medical Association and a prominent practitioner of Utah; a member of the Board of Medical Examiners of the State of Utah; a specialist on diseases of the ear, nose and throat, was shot and instantly killed in his automobile, May 2, by a man supposed to have been of unsound mind.

Robert B. Turner, M.D., Waco, Texas; Medical College of Ohio, Cincinnati, 1874; aged 65; formerly a member of the State Medical Association of Texas; chairman of the McLennan County Lunacy Board since 1913, was found dead in his office, May 2, from a gunshot wound of the head believed to have been self-inflicted, with suicidal intent while despondent on account of ill health.

John Davidson Jones, M.D., Cleveland; Western Reserve University, Cleveland, 1866; aged 78; a Fellow of the American Medical Association; for ten years a member of the Board of Education of Newburg, Cleveland, and for ten years thereafter a member of the Cleveland board; died in the Charity Hospital, Cleveland, May 4, four weeks after a surgical operation.

William Henry Sledge, M.D., Mobile, Ala.; University of Mobile, Ala., 1881; aged 60; formerly a Fellow of the American Medical Association; a member of the Medical Association of the State of Alabama and once president of the Mobile County Medical Society; for thirteen years president of the Board of Education of Mobile County; died at his home, April 30.

Francis Besant Bishop, M.D., Washington, D. C.; University of Maryland, Baltimore, 1883; aged 62; a Fellow of the American Medical Association and formerly president of the Medical and Surgical Society of the District of Columbia and of the American Electro-Therapeutic Association; died at his home, April 30, from meningitis following mastoid abscess.

Jesse Edwards Hunt, M.D., Kansas City, Mo.; Western Reserve University, Cleveland, 1902; aged 37; formerly a Fellow of the American Medical Association; a member of the Missouri State Medical Association; professor of pediatrics in the University of Kansas and a member of the staff of Mercy Hospital; died at his home, April 29, from diphtheria.

Burwell Alexander Duncan, M.D., Morehouse, Mo.; Medical College of the State of South Carolina, Charleston, 1857; aged 80; a Fellow of the American Medical Association; an esteemed practitioner of Aberdeen and Columbus, Miss., until 1902, when he located at Morehouse; died at his home, April 14, from cerebral hemorrhage.

John Gibson, M.D., St. Albans, Vt.; University of Vermont, Burlington, 1898; aged 48; a member of the Vermont State Medical Society; formerly adjunct professor of materia medica and therapeutics in his alma mater; a member of the medical staff of St. Albans Hospital; died suddenly at his home, May 3, from heart disease.

George Augustus Quimby, M.D., New York City; New York University, New York City, 1857; aged 84; said to have been the oldest alumnus of his alma mater; surgeon on the staff of the New York Hospital in 1856 and a member of the staff of St. Luke's Hospital from 1865 to 1867; died at his home, May 3.

Adolph G. Beyer, M.D., Milwaukee; Milwaukee Medical College, 1909; aged 45; formerly a Fellow of the American Medical Association; at one time a member of the faculty of the Wisconsin College of Physicians and Surgeons; died in the Emergency Hospital, Milwaukee, April 29, from pleuropneumonia.

Albert S. J. Burchett, M.D., Memphis, Tenn.; Meharry Medical College, Nashville, Tenn., 1884; aged 55; a colored practitioner, was found dead in Wills Park, Memphis, April 29, from a gunshot wound believed to have been self-inflicted with suicidal intent while despondent on account of business affairs.

Alexander H. Hepburn, M.D., Chicago; Northwestern University Medical School, 1899; aged 41; a member of the Illinois State Medical Society and a veteran of the war with Spain, in which he served as a member of the First Illinois Cavalry, U. S. V.; died suddenly, May 9, from diphtheria.

William Stanford Stevens, M.D., Boston and St. Albans, Vt.; Harvard Medical School, 1883; aged 56; in 1891 a member of the Massachusetts Legislature and in 1888 and 1889 a member of the Common Council of Boston; died at his home in Boston, April 29, from myocarditis.

Charles Poplin Harvielle, M.D., Salt Lake City; Washington University, St. Louis, 1899; aged 40; a Fellow of the

American Medical Association, assistant county physician of Salt Lake County, who had suffered for several years from disease of the throat, died in Denver, May 2

George Augustus Fagan, M D, North Adams, Mass, McGill University, Montreal, 1898, aged 45, a member of the staff of the North Adams Hospital and chairman of the North Adams Board of Health, died in the Samaritan Hospital, Troy, N Y, April 1, from Pott's disease.

Albert O Ward, M D, Indianapolis, Medical College of Indiana, Indianapolis, 1874, aged 73, for forty-nine years a practitioner of Indianapolis, a Fellow of the American Medical Association and a veteran of the Civil War, died at his home, May 1, from myocarditis

Edward Mortimer Paterson, M D, Oakland, Calif, Harvard Medical School 1871, aged 71, formerly professor of physiology and histology in the College of Physicians and Surgeons, San Francisco, died at the home of his son in San Jose Calif April 24

Buel Smith Bigelow, M D, Chicago, University of Vermont, Burlington, 1863, aged 76, died in the Henrotin Memorial Hospital, Chicago, April 24, from cancer of the cecum for the relief of which an operation had been performed a few days before

Herbert Stanley Monkman, M D, Vegreville, Alta, Trinity Medical College, Toronto, 1906, aged 39, at one time a practitioner of Bottineau, N D, captain in the Third Canadian Mounted Rifles, was killed in battle "somewhere in Flanders," December 2

Millard Fillmore Crawford, M D, Wray Colo, College of Physicians and Surgeons Keokuk, Ia, 1878, aged 60, for several years a practitioner of Yuma, Colo, for a month before his death a resident of Wray, died May 2, from influenza

Felix Amabile, M D, New York City, New York University, New York City, 1884, aged 54, died in his office, May 8, from the effects of hydrocyanic acid, self-administered, it is believed with suicidal intent while despondent on account of ill health

William Henry Harrison Warman, M D, Washington, D C, Howard University, Washington, 1880, aged 75, a medical examiner in the United States Pension Office, Washington, died at his home, April 17, from cerebral hemorrhage

Maurice Feiman, M D, Canton, Ohio, Cleveland College of Physicians and Surgeons, 1910, aged 27, formerly a Fellow of the American Medical Association, who was taken ill in Switzerland two years ago, died in Silver City, N M, May 2

John J Mugan, M D, North Battleford, Sask, formerly of Langdon, N D, Manitoba Medical College, Winnipeg, 1906, aged 46, formerly a Fellow of the American Medical Association, died at his home, February 5, from nephritis

John Erle Kenney, M D, Cheslea, Mass; University of Burlington Vt, 1882, aged 54, formerly a Fellow of the American Medical Association, a member of the Massachusetts Medical Society, died at his home, May 3

Ernest Clifton Morris, M D, Hephzibah, Ga, Medical College of Georgia, Augusta, 1899, aged 36, formerly a Fellow of the American Medical Association, died at the home of his father-in-law near Hephzibah, April 28

John A Hunter, M D, Philadelphia, University of Pennsylvania, Philadelphia, 1866, aged 78, formerly an assistant in his alma mater and visiting physician to Moyamensing Prison, died at his home, April 29

William H Yelton, M D, Butler, Ky, Cincinnati College of Medicine and Surgery, 1869, aged 72, a member of the Kentucky State Medical Association, died at his home, January 18, from cirrhosis of the liver

Axel Fridolf Swanson, M D, Southampton, Mass, Albany (N Y) Medical College, 1913, aged 24, a member of the Massachusetts Medical Society, died at his home, March 19, from pulmonary tuberculosis

C J Renfro, M D, North Pleasureville, Ky, Jefferson Medical College, 1867, aged 73, a Confederate veteran, formerly a Fellow of the American Medical Association, died at his home, recently

George Lane Fenton, M D, Kingsley, Mich, Eclectic Medical Institute, Cincinnati, 1893, aged 67, a member of the Michigan State Medical Society, died at his home, April 29, from pneumonia

Barton M Fletcher, Middlesboro, Ky (license, Tennessee, 1889), aged 79, a Confederate veteran, died at his home, April 19, from senile debility

Caleb M Emert, M D, Elizabethton, Tenn, College of Physicians and Surgeons, Baltimore, 1884, aged 75, a veteran of the Civil War, died at his home, April 25, from cerebral hemorrhage

Bertram Leslie Longenecker, M D, North Stonington, Conn, College of Physicians and Surgeons in the City of New York, 1890, aged 48, died at his home, April 29, from pneumonia

Franklin T Fenton, M D, Detroit, Pulte Medical College, Cincinnati, 1891, aged 51, formerly a member of the Michigan State Medical Society, died at his home, May 7, from pneumonia

Hugh Francis Quinn, M D, Bangor, Me, Medical School of Maine, Brunswick, 1909, aged 36, a member of the Maine Medical Association, died at his home in Bangor, about April 30

Samuel McGogney, M D, Castle Shannon, Pa, Jefferson Medical College, 1879, aged 59, died in the South Side Hospital, Pittsburgh, May 4, a few hours after a surgical operation

Robert Lee Tays, M D., Herkimer, Kan, Northwestern Medical College, St Joseph, Mo, 1893, aged 66, for several years coroner of Marshall County, died at his home, April 30

Garland Silvia Saylors, M D, Floral, Ark, University of Arkansas, Little Rock, 1914, aged 28, a member of the Arkansas Medical Society, died suddenly at his home, May 4

Henry H Miller, M D, Rossville, Kan, University of Pennsylvania, Philadelphia, 1872, aged 64, for forty-four years a practitioner of Kansas, died at his home, May 1

Joseph Oswalt, M D, Irving, Kan, Kansas City (Mo) Hospital College of Medicine, 1888 aged 78, a practitioner for more than forty years, died at his home, April 29

John M Mulholland, M D, Pittston, Pa, Eclectic Medical Institute, Cincinnati, 1875, aged 65, a member of the City Health Board of Pittston, died at his home, April 25

John M Lisle, M D, Columbus, Ohio, Starling Medical College, Columbus, 1875, aged 68, a veteran of the Civil War, died at his home, May 4, from heart disease

John Deal, M D, Riverton, Ill, Vanderbilt University, Nashville, Tenn, 1878, aged 67, a Fellow of the American Medical Association, died at his home, February 3

Charles Sinclair Stone, M D, Boston, Harvard Medical School, 1886, aged 56, a Fellow of the American Medical Association, died at his home, April 22

George W Metzgar, West York, Pa, (license, Pennsylvania, 1881), aged 61, a practitioner since 1877, died at his home, March 31, from pericarditis

John Aubrey Vaughan, M D, Brooklyn, Eclectic Medical College of the City of New York, 1891, aged 70, died at his home, January 29, from nephritis

John G Nugent, M D, Chipman, N B, Cincinnati College of Medicine and Surgery, 1876, aged 74, died at his home, January 10, from pneumonia

George Franklin Ritchey, M D, Mechanicsburg, Pa, Jefferson Medical College, 1889, aged 50, died at his home, April 23, from heart disease

Andrew Albert Johnston, M D, Unity Station, Pa, University of Pittsburgh, Pa, 1891, aged 61, died in the Columbia (Pa) Hospital, April 24

Cyrus W Shafto, Asbury Park, N J (license, New Jersey 1892), aged 44, died at his home, April 25, from cerebral hemorrhage

David Duncan, M D, Chicago, Hahnemann Medical College, 1887, aged 68, died at his home, May 3, from heart disease

Marriages

WALTER LOUIS MACHEMER, M D, Buffalo, to Miss Fanny Carter of Canisteo, N Y, at Bath, N Y, May 1

WILLIAM OSCAR BENJAMIN, M D, Detroit, to Miss Helen M Foote of Minneapolis, April 22

WILLIAM THOMAS DEAN, M D, to Miss Frances M Claiborne, both of St Louis, May 1

FLOYD H SPENCER, M D, to Miss Mary Dalgarn, both of St Joseph, Mo, April 29

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

THE WINE OF CARDUI SUIT

(Continued from page 1575)

April 20, 1916, Afternoon

TESTIMONY OF DR JOSEPH BOLIVAR DE LEE

The Court met pursuant to recess Dr Joseph Bolivar De Lee was called as a witness for the defendants

DIRECT EXAMINATION BY MR T J SCOFIELD

Dr De Lee testified that he graduated from the Northwestern University Medical School of Chicago in 1891, was intern in the Cook County Hospital for a year and a half For nearly one year, he was engaged in general practice and then did postgraduate work abroad in the universities of Vienna Berlin Paris and London He was attending obstetrician at the Cook County Hospital for several years and has been consulting obstetrician for ten or fifteen years He is also attending or consulting obstetrician in the Chicago Lying-in Hospital, Mercy Hospital, Provident Hospital and Evanston Hospital and Silver Cross Hospital in Joliet He practices obstetrics as a specialty and has held the chair of obstetrics in the Medical School of Northwestern University since 1897

Q—Doctor will you tell the jury approximately if you can remember the number of obstetrical cases which you have had charge of or have been under your direction? *A*—The word obstetrical cases is a little bit too broad, I will specify if you please

Q—Very well *A*—The number of actual confinements or deliveries that I have conducted myself with my own hands would be approximately thirty five hundred—three thousand five hundred—and in addition to that I have been called in as counsel or I have attended as instructor or as spectator in four or five thousand other cases, that occurred in the various hospitals with which I am connected, or that occurred in consultation as I say where I did not have the direct care of the patient but as you may say, sat in' on the case Four or five thousand

In addition to that the institutions with which I am connected of which I was the head would represent between twenty and twenty five thousand case and in these cases, I would have the responsibility in directing the course of practice of that institution, and in that way the pathological cases—the complications—would come to my notice, and thus I would get the experience from the pathological cases

Dr De Lee then described to the jury what is meant by pregnancy and labor, and mentioned some of the various complications which might occur He illustrated with a mannikin and with charts to the jury the normal female pelvis and the changes which the uterus and other organs undergo during pregnancy He showed the pelvis in a normal woman and the head of a baby and indicated the mechanism of normal labor He then showed to the jury the many complications which may occur due to various presentations, etc, stating that there are 136 different positions in which the baby can present He then showed to the jury a contracted pelvis and the impossibility of normal labor when such a contraction occurs

Dr De Lee said that he has had no experience with carduus benedictus

Q—Have you had any experience with the use of viburnum prunifolium? *A*—Yes

Q—What experience have you had with it? *A*—Years ago I gave large quantities of extractum viburnum prunifolium for the prevention of miscarriage.

Q—Well what was your experience with it Doctor? *A*—I found that it was useless and expensive and discontinued it.

There was then read to Dr De Lee a hypothetical question similar to that which has been read to other witnesses, and a statement from the Home Treatment Book under the heading, 'Disorders of Pregnancy" He stated that in his opinion the hypothetical medicine would not assist in making childbirth easier by reason of its gentle, building tonic, strengthening effect on the female organs and sexual parts concerned in the birth of the coming child"

His reason is that it is impossible for such a combination of drugs to correct a malpresentation and relax a rigid cervix It would not make child birth easier There was then read to Dr De Lee a second statement from the "Home Treatment for Women" under the same heading "Disorders of Pregnancy" In reply he stated that the hypothetical medicine would not have a good effect in giving health and life force to the woman

A—I would consider it would have a bad effect on the child It is generally believed that alcohol should not be given during pregnancy because of its effect on the child, that is given continuously because of its effect on the child And this question is just with reference to the child, is it not?

Q—Yes Well both mother and child Well particularly with reference to the added health strength and life force of the mother? *A*—The life force of the mother—no, I would say that alcohol would be not the best remedy to be given continuously during pregnancy for its effect upon the strength of the mother

He was then read a third statement from the "Home Treatment for Women" to the effect that "No one need be afraid of taking Wine of Cardui during pregnancy Its action is gentle and strengthening and it can never do anything but good"

Q—What is your opinion? *A*—That that statement is erroneous and misleading The medicine the hypothetical medicine which you have given me to consider has both actual and potential qualities for doing harm

Dr De Lee then defined for the jury puerperal eclampsia and the general understanding of this condition

ECLAMPSIA

Q—Now Doctor during pregnancy and when these kidney conditions to which you have referred or these cases which may lead to eclampsia are present how can you determine that fact in advance of labor? *A*—By careful watching of the patient for symptoms of the poison and also by taking her blood pressure regularly and by examining her urine for albumin

Q—Now when you discover a condition of abnormal blood pressure or blood pressure that is not satisfactory or albumin in the urine what do you do? *A*—We put the patient on a very strict diet put her in bed and unload her bowels and we try and get her emunctories that is her organs which throw off poisons very active and failing to get rid of the poisons in this way we occasionally interrupt the pregnancy, because it is the pregnancy which is developing these poisons and since we cannot remove the poisons we have to remove the pregnancy

Q—Now doctor, assuming that Wine of Cardui corresponds to the hypothetical solution which I have described to you, have you an opinion whether or not the use of Wine of Cardui would have any effect in correcting the kidney condition which you have just described if taken during pregnancy? *A*—Yes I have an opinion about that

Q—What is that opinion? *A*—That it would be not alone useless but harmful

Q—In what way would it be harmful? *A*—In two ways The kidneys during pregnancy are the most vulnerable portion of the woman s system Any bad condition that affects the woman during pregnancy is most likely to settle on her kidneys. Alcohol administered continuously during pregnancy has a bad effect on the kidneys. And the kidney is already overworked during pregnancy it is generally admitted that the kidney is overworking it is excreting for the baby and for the mother and an organ that is already overworking should not be given alcohol—that is should not be given additional work in excreting alcohol.

And while that is a real objection there is another objection which is none the less real, in fact, more active and that is the covering up of the symptoms and lulling the woman into a sense of security You give a remedy that may be useful and tell a woman 'now take this and you will be all right and she is likely to accept it as a fact and neglect to bring her water to the doctor for examination Oh I am going to be all right I am taking this medicine.' She won t go to have her blood pressure taken. And a contracted pelvis of that class (illustrating with pelvis) may pass unnoticed until labor comes on and the time is gone to do anything

Or a diabetes, for example might pass unnoticed A woman with diabetes during pregnancy If she were to take this hypothetical medicine, with the alcohol and the bitter stomachic it would increase her appetite perhaps and she would eat more food of an antidiabetic nature — that is not of a diabetic nature — I mean something that should not be taken in diabetes She will eat more food than she should Whereas if she had not taken this medicine she would not have had such an appetite That is the reason I say that it has both actual and potential bad effects

The witness then defined and illustrated with the aid of the mannikin extra-uterine pregnancy

Objection was made to the introduction of the witness' opinion as to the use of Wine of Cardui in extra-uterine pregnancy, the court stating that the witness had already stated that in his opinion it would not benefit a woman in any kind of a pregnancy

TREATMENT OF CONTRACTED PELVIS

Q—Doctor, in cases of contracted pelvis in connection with child birth, what do you do under such circumstances? A—It is very necessary to discover a contracted pelvis early in pregnancy We let the woman go on to term, except when there are other conditions which indicate the termination of pregnancy before term, which term means the end of pregnancy, nine months We let her go to term Then knowing that she has a contracted pelvis we do not always let her go into labor, but we either do a cesarean section, take the baby out through the belly, or else we so conduct the labor that the woman should not get into a precarious condition before it is too late to do anything to save her and the baby There are a great many methods Sometimes we leave the woman go to labor and see if she cannot deliver herself Then we do a pubiotomy, that is, we cut the bone here Or occasionally we apply instruments like forceps

Q—Now, during your experience have you ever performed that operation? A—I have performed 85 cesarean sections, and over a thousand forceps operations, and innumerable other operations for this purpose

Q—I suppose, doctor, you have written considerably on these different subjects, have you? A—Yes, yes

CROSS-EXAMINATION BY MR HOUGH

Dr De Lee testified that he recommends that a woman should apply to her physician as soon as she knows she is pregnant This should be done with a view toward nipping in the bud such complications as may affect her life or that of her baby

A—The second proposition, as to when the patient should enter the hospital, that is more or less domestic A woman that lives out of town—and thousands do come every year to Chicago—is requested to live in a hotel near the hospital and bring her urine every two weeks to the hospital, and have her blood pressure taken Then if she already has any serious trouble she is put in the hospital to await the confinement in the hospital A case that I am going to do cesarean section on I would like to have in the hospital for three weeks, to avoid the possibility of marital relations, to get the patient into good physical condition for the coming event

Q—In this connection, in your book you say you frequently treat the husband What do you mean by that? A—In what connection was it said?

Q—Don't you recall that statement in your book? A—Oh, yes, I have treated the husband in many different connections

Q—What did you mean when you said that? A—I will have to give you all the conditions If the husband has gonorrhea I would like to cure him up before the wife gets pregnant If the husband has syphilis I would like to cure him up before he impregnates his wife

Q—You mean treat the husband then before the wife becomes pregnant? A—Of course

Q—You don't refer to a treatment of the husband after the wife was pregnant? A—Well, you might stretch it to mean that As far as treating the husband is concerned for any condition affecting the woman's labor, I would say by the time the child was conceived that he had passed out of the range of treatment During pregnancy I could imagine certain conditions where I should recommend treatment of the husband

Q—I know what you mean by that statement You mean treat him before pregnancy? A—Yes, as a rule

Q—And not treat him after pregnancy? A—I could still imagine a condition where I would treat a husband after pregnancy

Q—I am not asking you what you could imagine I am asking you what you mean by the statement in your book You mean treating him before pregnancy? A—In that particular connection

Q—Yes A—It is pretty hard for me to answer a question that generalizes on all the subjects or conditions where I would treat a husband—to answer that in one answer If you will tell me just what you want I will answer it

Q—Now when you are not going to perform cesarean section how early do you want the woman in the hospital? A—The majority of women in Chicago wait until the labor pains begin, and then they come to the hospital

Q—How soon is that before delivery, as a rule? A—Varies all the way from—well, sometimes they are delivered in the taxicab or on the stairs of the hospital Again, they may be in the hospital two or three days in labor

Q—But that is not what you recommend? A—No, that is not what I recommend And what I recommend, and what nature does, are two different things

Q—I am asking you how early you want them to come to your hospital? A—The minute they know that they are in labor As soon as they think that the labor has begun, that moment They should not wait They should come to the hospital And if they have been mistaken, why all right, come there, and then they can go home the next night

Q—Well, would you like them there three days before? A—If I can have them there then, yes If I knew exactly when labor was going to occur I would say, "Yes, please be in the hospital three days before labor is due" That would be very nice

Q—The practice of obstetrics is on a very low plane, isn't it? A—The practice is still on too low a plane It ought to be higher, and it is going higher every day

Q—You mean by that every woman who is about to have a child should go into a hospital and have a doctor on hand all the time? A—That would be ideal

Dr De Lee described his method of examination and treatment of a patient who comes to a physician after the first month of pregnancy If drugs are given they are given for conditions that are pathologic Asked concerning disturbances of urination, he stated that the subject would have to be considered separately in each case and that discrimination must be made very careful Nobody but a doctor could tell just what medicine to give in any single case

Q—Do you mean all doctors could do that, or only a few? A—Not all doctors I wish they could

Q—You mean only a few doctors in your class? A—No, a lot of them besides me

Q—Do you mean a lot of them? A—Yes, I am happy to say, a lot of them

Asked to suggest drugs which would permit the flow of urine, he mentioned hot tea, saffron tea, camomile tea and infusion of digitalis He would avoid tinctures and extracts because of the irritant action of the alcohol In cases of constipation he would modify the diet, give liquid petrolatum for its lubricant effect and recommend stewed prunes, perhaps with addition of a little senna

Q—Did you ever give regulin? A—Regulin—I gave it some years ago I forget now what it is I think it is a sort of agar agar preparation Chinese preparation—agar agar—

Q—No A—Well, sulphate, phenolphthalein

Q—No A—Then I don't know what it is

Q—Do you mean to say you gave it and didn't know what it was? A—No, my brother asked me about it, and I confess I don't know what Regulin is I don't believe I gave it But as a rule I stay away from cathartics Then if I have to give a cathartic I have a very favorite combination It contains nux vomica, cascara rhamnus purshiana and rhubarb It works very nicely in combination It is a sort of a synergetic affair

Q—Did you say synergetic? You mean synergistic, don't you A—Well, you can say synergetic

Q—It is not a question of etymology A—I say synergetic If you want to say synergistic you may do so

Q—Do you mean to say that they mean the same thing? A—I will not haggle with you on a question of etymology

Q—The etymology is not involved I am simply asking you if you mean synergistic A—I won't argue that with you Have it synergistic or synergetic

Q—Go ahead A—They act synergistically or synergetically they act together, one helping the other

Q—Any other medicines that you give? A—I don't give it as a continuous cathartic

Q—Any other medicines you give for that condition? A—Do you mean of constipation?

Q—Yes A—I give milk and molasses enemas Enemas of milk and molasses and water

Q—That is all you can recollect? A—That is all I can recollect now

Q—What did you give before you knew anything about Russian oil? You haven't known about it always? A—No, that is a rather recent application I gave the tonic laxative which I have mentioned to you, and I gave agar agar, which I thought was regulin when I mentioned it, because it is given under a great many different trade names And Pluto water Epsom salts

Q—You are not opposed then to proprietary or secret remedies, are you? A—Well, if I know what is in it I don t oppose them on general principles If they do the work

Q—It doesn't make much difference what is in them, if they do the work? A—Oh, yes it makes a difference

Q—If it does the work? A—Oh, yes, it makes a difference

Q—If it does the work? A—I am careful

Q—Even if it does the work? A—Oh, yes, it makes a difference It does not always follow there, because sometimes they may do the work and they do harm at the same time

Q—You mean because of another ingredient? A—Because of another ingredient That is the objection to prescribing things that have several ingredients You get the effect of the one that you want but you have to take the effect of other things that you do not want Now if the disease that you are prescribing the remedy for is so bad that you are willing to take the effects of the other remedies in order to get the good effects of the one, that is the doctor's business to decide, and he can decide it as a rule

Q—Now are there any other conditions than constipation and bladder trouble which would require medical treatment, that is medicines given through the mouth, during pregnancy? A—Yes

Q—What other conditions? A—One of the most common conditions which I have met is frequent miscarriage Women have a history of frequent miscarriage for apparently no reason, and if I can find syphilis, as a cause of that, why, of course, I give antisyphilitic medicines If it is malaria—sometimes they have that

Q—You do not give that in the mouth? A—What?

Q—Antisyphilitic medicines? *A*—By mouth

Q—Do you? *A*—Why of course

Q—You do not believe in salvarsan? *A*—Yes, yes

Q—You do not give salvarsan by *mouth do you?* *A*—No, you give that intravenously

Q—I thought nobody gave anything but that nowadays *A*—I will not testify as an expert for the genito urinary specialist but if I had syphilis I believe from what I know of the remedies I would rather take the old fashioned treatment by mouth and the *inunctions instead* of salvarsan, but, as I say I do not testify to that as an expert

Q—What is the next then? *A*—If a woman has malaria, I try and treat the malaria as a cause of these frequent abortions If she has tuberculosis, I try and treat the condition that it presents in brief, in any pathological condition that requires the use of *medicines by* mouth I do not hesitate to give them providing the medicines do not interrupt the pregnancy—they don t have a bad effect on the pregnancy

Q—But you never give any *medicines* which *contain* any alcohol because the alcohol is dangerous during pregnancy? *A*—*That is* too broad Occasionally you have to give a medicine containing a small amount of alcohol

Q—What would you call a small amount of alcohol? *A*—Ten or fifteen drops

Q—Well, what per cent? *A*—Wouldn't the per cent depend upon the amount of the remedy? Ten or fifteen drops of alcohol two or three times a day a couple of weeks or a month will not hurt the patient in my opinion More might But as I say, I avoid those remedies.

Q—What is that? *A*—I avoid, as a matter of practice, the use of alcohol in pregnant women

Dr De Lee was then cross-examined as to the percentage of alcohol in the infusion of digitalis He said that he prepares an infusion by pouring some boiling water over an ounce of leaves

Q—You said the infusion of digitalis does not contain alcohol you are mistaken about that aren t you? *A*—Very well I would be glad to admit I was mistaken I know I made the infusion the last infusion last time I used it.

Q—Well but the Pharmacopeia prescribes how it should be made, doesn t it? *A*—Very good

Q—And it requires 100 c.c of alcohol doesn t it? *A*—I do not know I never read the Pharmacopeia.

Q—You mean you practice without reference to the pharmacopeia? *A*—Yes.

Q—Or the National Formulary? *A*—Yes

Q—Or any *medical book that anybody ever wrote?* *A*—*Oh that* is different

Q—What medical books do you rely on or do you have confidence?

After objection which was overruled, the witness answered

Mr Hough *Q*—What do you mean by that that is different ? *A*—I mean this that when I read a medical book I take the man who is writing it and see what I consider his value as an authority is and if he says something that I don t agree with I don t accept it in practice. He may say a whole lot of things in that book which I know from my own experience are fallacious so when you say don t I practice according to medical books I say right off that is different

Q—What use do you make of medical books? *A*—To add to my general knowledge

Q—You mean merely to find out who agrees with you and who disagrees? *A*—No, no that is different. I want to know what people are doing And when I find something in a medical book that appeals to me as *being reasonable I will use it in my* practice. *If I find it* unreasonable I discard it

The witness was asked which medical books contain anything which he regards as reasonable Objection was made to the question and sustained He was then asked whether he did not start with some list of books when he first began to study to which he answered that he did Objection was made to the question but was overruled

Mr Hough *Q*—Then you followed in your original practice what the medical books said? *A*—Yes every doctor does that.

Q—Then you formed your opinion later from your own experience? *A*—Exactly

Q—Which might have the effect of modifying what some medical books said? *A*—As a rule.

Q—But *has your experience taught you to disbelieve the majority* of things that are in medical books? *A*—I would hardly know how to answer that. That is too sweeping a generalization

DEATHS IN LABOR

Q—Well I will not insist upon your answering it When you say in your book *that 20 000 women die in the United States every year* from direct or indirect effects of labor ' what do you mean? *A*—These statistics furnished us by the United States Census Bureau of last year—that is the la t time they came out—enumerated the deaths of 10 010 I think that is about it—it is around ten thousand deaths of women in childbirth Those are reported deaths We know they died because the death certificates came in That represents the returns from the registration area of the United States, of 60 odd per cent —I am not sure of the exact figures if I had known I was going to be asked this question I would have brought *them down*

Now, then if 60 per cent area of the United States is registered and the women dying in *that area are reported to the Washington* Census Bureau the other 40 per cent of deaths not being reported it would be pretty safe in saying that if ten thousand women die in the registration area another four thousand every year will die in the nonregistration area, which would give us 14,000 women that die in the nonregistration area—that *is, I mean* in the total United States That is general, and I will not insist on the accuracy of all those things but it is general Now every year, gentlemen, a certain number of women die during childbirth and after, where their deaths are not reported to the authorities, because they die under conditions that might be suspicious *child bed fever for example,* or somebody made a mistake and they are reported as dying from typho malarial fever or some other condition A certain proportion of those are so reported

Then again a woman will have a contracted pelvis, and some doctor will use forceps where *he should have done cesarean section* and tore that poor woman all to pieces She has to go back again in a year or so and be repaired those stitches put in, and the uterus that has been misplaced put in order by an operation, and she dies as a result of that operation Now that operation while it was the immediate cause of death dates back and should be quoted in this six thousand And my judgment is that another six thousand would be a very small estimate to put upon those women that die from the immediate and remote effects of childbirth

Q—Were they all cases where the doctors were in charge? *A*—*No doctors and midwives*

Q—Doctors and midwives? *A*—Yes

Q—Those are the reportable cases? *A*—Well they were reported cases as they came within the knowledge of the Health Department

Q—What did you mean about the number of women who died in *childbirth but who were operated on under another diagnosis?* *A*—I just told you that that they—

Q—You mean when it was a mistake in diagnosis? *A*—Yes, through a mistake—yes, a mistake in diagnosing

Q—You don't include the abortions in that, do you? *A*—I would *have to look at the statistics to see if abortions were included in that* The American statistics are not very useful to draw positive conclusions from

The witness was then asked concerning the various types of anemia and he said that he usually gives an alterative tonic, for example, a mixture of iron, arsenic, mercury and iodin He was asked concerning the preparation of digitalis and he stated he has prescribed an infusion made up according to the pharmacopeial preparation

There was read to the witness a prescription for atonic constipation attended with flatulence which he is said to have prescribed consisting of fluidextract of cascara sagrada, 30 c c , tinctura rhei aromatica, 30 c c , tinctura nucis vomicae, 20 c c , elixir taraxaci comp , N F , enough to make 120 c c

The witness was asked how much alcohol is contained in these preparations He answered that the patient gets 30 drops of the medicine three times a day He was questioned specifically concerning the percentage of alcohol in each ingredient He finally stated that the total amount of alcohol represented in a dose would be not more than 15 drops The patient is instructed not to take that continuously She is given only enough to last ten days and is instructed to discontinue it as soon as possible

Council for the plaintiffs argued that there were 24½ drops, finally agreeing that he made a mistake, the witness stating

The Witness—I granted you fifteen drops, and, as a matter of fact it is 7½ drops of pure alcohol.

Mr Hough *Q*—Now are there any other prescriptions? Does that remind you of any other prescriptions containing alcohol? *A*—I prescribe very little drugs. I am rather opposed to indiscriminate drugging and I am therefore very discriminating in using them I use alcohol in a nipple wash compound, spirits of lavender

Q—I don t mean outside I am talking about in the mouth. *A*—Yes yes Oh yes I use ergot fluidextract of ergot for postpartum hemorrhage Is that what you wanted me to answer?

Q—Yes that is one *A*—And I also use ergot for the abortion—

Q—How much ergot? *A*—The patient gets ten to fifteen drops three times a day

Q—Of *alcohol?* *A*—No, fluidextract of ergot. If she took more than that she would get ergot poisoning

Q—How much alcohol does that contain? *A*—I think ergot contains about 50 per cent of alcohol and so she gets 5 to 7 drops of alcohol

Q—Doctor it has *been testified to here* that pregnancy is a normal function What is your opinion about that? *A*—You have opened up a very interesting subject.

Mr Hough—I thought I would

Mr Walker—And you did not have to go to the figure.

Mr Hough *Q*—Your *opinion* is that it is pathological is it not? *A*—With certain modifications pregnancy is a natural function

Q—Pregnancy and puberty are both natural in a state of nature? *A*—Yes

Q—But in our state of civilization they are both really physiological—

Mr Walker—Pathological

Mr Hough—Pathological, I should say

The Witness—They are very often pathological, *so often that* they require medical attention from start to finish, if it is possible to give the patient the medical attention

Q—Now you have been testifying, Doctor, with reference to ideal conditions, haven't you? *A*—We always strive for ideals

Q—What do you suppose the poor woman who lives back in the country is going to do if she cannot come to your sanitarium? *A*—Well, most of the women don't come to my sanitarium or any sanitarium—

Q—I mean any sanitarium *A*—At least I have no sanitarium And what a woman in the country should do would be, as soon as pregnancy has declared itself, to go to the nearest reputable physician and let him give her whatever care it is possible under the circumstances then and there existing, warn her against the complications which are likely to arise, insist that her husband when he comes to town, as he probably does frequently, bring to him a bottle of her water and at least examine the urine These few things any woman can get, *no matter* where she is, and pretty nearly every doctor, cross roads doctor, knows enough to manage those cases

The witness then testified again as to the number of deaths occurring from childbirth, and as to the symptoms of extra-uterine pregnancy

The average physician can tell on examination whether or not the woman is going to have a difficult time in labor He stated that the head of the fetus might be compressed to a thickness of three sheets of paper

Q—Doctor, when you said that this hypothetical medicine, taken during pregnancy, would have no effect whatever, except the effect of the alcohol, did you mean in any condition attending pregnancy? *A*—Let us separate that into two parts

Q—First, did you make that statement? *A*—Not exactly

Q—How did you state that? *A*—I do not remember exactly how I stated it I can answer the question, however to your satisfaction, if you will let me separate it into two parts

If a woman needed a little appetizer, and I gave her some bitter medicine, whether it is viburnum or anything else it might stimulate her appetite a little If the woman needed alcohol in the medicine and I gave her alcohol—I would give her alcohol *if she needed it by the prescription*, and then it would have the effect of the alcohol

Q—Well, suppose the medicine was hepatic? *A*—An hepatic stimulant, is that what you mean?

Q—Yes *A*—How much would I have to give her in order to get the hepatic stimulant?

Q—No, suppose it was hepatic in the doses in which it is given, an hepatic stimulant in the doses in which it is given *A*—In order to give that dose, I would have to give of that particular hypothetical medicine, so much that the alcohol in it would be prohibitive

Q—Well, you lose sight of the hypothesis you are supposed to assume You know nothing about carduus benedictus *A*—Practically

Q—You have never used it? *A*—Practically none

Q—Well, have you ever used it? *A*—Yes, I prescribed carduus benedictus once

Q—When was that? *A*—About two weeks ago Interested in what was going on, I had a case which I thought might be useful

Q—Where did you get the carduus benedictus? *A*—What?

Q—Where did you get the carduus benedictus? *A*—If you will allow me, I will tell you So I prescribed it, and before the patient—it was a case of hemorrhage, threatened abortion and I told the woman to go home and go to bed, and rest in bed, and I gave her this prescription, and her husband went to fourteen different drug stores and could not get it In the meantime the patient got well So that when I say that I have practically no experience, that is what I mean

Q—Then you have no experience *at all*? *A*—Well, that is for you to decide You asked me, and I am telling you

Mr Walker—Why sure, she was cured by the mere prescription He has got the experience All you had to do was to suggest it, and the woman got well

The Witness—Well, the woman did not know it

The Court—Why, he only told her husband

The Witness—Her husband did not know what was in it

Mr Walker—She got cured by telepathy

Mr Hough *Q*—Do you mean the woman herself, did not come to you? *A*—What do you mean?

Q—This patient, she herself, did not come to you? *A*—Oh, yes, sure

Q—You gave the prescription to her, didn't you? *A*—No

Q—You mean her husband came with her? *A*—Now, wait a minute I want to recall the incident I don't remember whether her husband was there or not, but anyway she was an ignorant Russian, Jewish woman, and I doubt if she could read and I doubt if her husband ever looked at the prescription, and I am telling you I gave her the prescription, and she went home and went to bed, and did not get the medicine until late the next night They had to send to the wholesale druggist, I guess, to get it, and by that time the hemorrhage had stopped

Q—Did you call on her the next day? *A*—No, the husband telephoned me at the end of the week I told him to call me up and let me know the effect of that medicine, and he told me what I told you So I said, "Wait another week and bring your wife down" He went away and so I examined her and she was all right That is all the experience I have had

Q—You did not see the medicine that she got, did *you*? *A*—No Well, that she did not get

The witness was asked concerning the dosage which he prescribed He stated that he could not give sufficient of the hypothetical medicine mentioned to get the effect of either of the principles mentioned without giving *more* alcohol than he would wish to prescribe

He was asked whether he assumed that volatile oil in the *hypothetical* medicine had no effect He stated that volatile oils in the combination were so small in quantity as to be negligible He stated that volatile oils as usually given are inert He was asked what volatile oils that he could remember that had any effect He stated that even supposing that the diuretic and diaphoretic principles are present in sufficient amount to give that action he still considered this mixture would not be safe to give in pregnancy not *only* because of the amount of alcohol but also because diuretic or diaphoretic drugs *must not* be given without the physician knowing what he is giving them for

The further hearing of the case was adjourned until April 21, 1916, 10 30 a m

April 21, 1916, Morning

TESTIMONY OF DR JOSEPH B DE LEE (*continued*)

The Court met pursuant to adjournment Dr Joseph B De Lee resumed the stand for the defendants

CROSS-EXAMINATION BY MR HOUGH

Dr De Lee was asked *as to his* knowledge of alcohol He stated that it was general He was asked

Q—Are you familiar with the statement of Dr J Clarence Webster on the subject in his book on Diseases of Women"? *A*—I don't know what he says about it

Q—Well is this statement a fact "Brandy or whiskey is valuable where there is much exhaustion As much as 10 or 12 ounces, or *even more, may be administered in 24 hours chiefly for the food value*, though the stimulant action is also important" Is that a fact?

Mr T J Scofield—I object to that question, if the Court please

The Court—What is the objection?

Mr T J Scofield—I don't see how it is cross-examination in any way, or how it is material

The Court—Well, this is not what Dr Webster said, I mean so far as the question is concerned The witness said he did not know what Dr Webster said in his book Now, Mr Hough has a right to ask him whether alcohol in these doses, under these conditions he regards as proper

Mr Hough *Q*—Is that a true *statement, in your* opinion?

The Court—Do you agree with that statement?

The Witness—*Since that is an important* statement, and I want to know the details, might I ask you to read it again?

Mr Hough *Q*—Well, the statement that is important, is the fact that it may be administered in as large quantities as 10 or 12 ounces in each 24 hours for its food value as well as for its stimulating value *A*—Under what subject, may I ask, is that recommendation given?

Q—Now, would a woman during pregnancy be able to oxidize or assimilate freely less alcohol than she would in any other menstrual disturbance? *A*—You have assumed that pregnancy is a *menstrual* disturbance That is an erroneous assumption

Q—Well leave out the word 'other" Any *menstrual* disturbance? *A*—Offhand I would say that the *woman's* power of assimilating and getting rid of toxic (*poisonous*) matter—toxic means poisonous—I would say that a woman's power of assimilating and getting rid of toxic products during pregnancy would be diminished on account of the weakness of the kidneys, the vulnerability of the kidneys to toxic influence

Mr Hough—I ask that that answer be stricken out as not responsive

The Court—It is not directly responsive

Mr Hough—And it has no bearing on what I asked, which was whether a woman in pregnancy would assimilate more or *less* alcohol than in menstrual disturbances without pregnancy? *A*—Assimilation—I would like to explain to the jury—consists *in the* using up of a medicine and its removal from the body *That is part of the* function of assimilation And I have *not made* any pharmacological experiments to determine how *much* alcohol a woman can assimilate and get rid of during pregnancy as compared with the same woman during the menstrual *periods* I doubt if such pharmacological experiments have been *made* So that I can only generalize in that way and use *my* general information regarding poisons, and we do know that all forms of poison are less easily gotten rid of during pregnancy That is generally understood

Objection was made to the witness stating whether the statement of Dr Webster was true or untrue

Mr Hough Q—Will you state then, whether in your opinion a woman suffering from any female disease can assimilate so much as ten or twelve ounces of brandy or whisky a day? *A*—That is not a statement for an expert on obstetrics to decide That is a pharmacological—

Q—Have you no opinion on the subject? *A*—What?

Q—Have you no opinion on the subject? *A*—The general impression is that a woman can assimilate two ounces of alcohol two or three ounces of alcohol in a day Whether or not it is advisable to give that amount of alcohol depends on the case. The olden time treatment for childbed fevers was alcohol They would give as much as a quart of whisky a day, and it was said that women could absorb and assimilate as a food a quart of alcohol in a day — or whisky not alcohol Now my opinion is that that amount of alcohol—and I base my opinion on my own experience as I have tried it—that that amount of alcohol is harmful and not good

Q—What is the maximum amount, in your opinion which is not harmful? *A*—Well I have given in the form of an eggnog to stimulate the appetite, or to produce a little change in the diet or to encourage the condition I have given as high as an ounce possibly two ounces in a day But if the woman has a tendency to—

Q—Before you go on will you just explain how many drops there are in an ounce or two ounces? *A*—Oh I should say in an eggnog a woman gets a teaspoonful of whisky, sometimes two teaspoonsful of whiskey to brace her up over a depressed period

The witness was then asked if he relied on any statements made by THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION in forming his opinion He answered that he relied on all the literature he has read, things that he has heard in court and from various people He would not assume anything regarding a statement, he would wish to know who made it and would study each individual experiment and see whether the experiment suited him

Dr De Lee was asked if he would give the name of the woman for whom he prescribed carduus benedictus He stated that he preferred not to do so and would not care to give it privately to the counsel for the plaintiff The Court stated that where the case was brought out on cross-examination he doubted much if the Court should be required to direct the witness to furnish the name In the case in question Dr De Lee examined the patient in his office, for which the patient paid $2 He was questioned specifically regarding the details of the examination

Q—When she came back did she tell you what she had paid for the prescription? *A*—No I didn t ask her

Q—But you didn t expect it to do any good when you gave it to her? *A*—That is one of the reasons I prefer not to give you her name

Q—Why? *A*—I rather hesitate to let her know that I gave her a medicine that I did not think was going to do her any good

Q—Well, but you charged her for it too, didn t you? *A*—No, I beg your pardon

Q—Didn't you charge her $2? *A*—I charged her $2 I gave her a thorough examination I advised her to go to bed—a remedy which I believed was going to cure her

Q—Aren't you going to give her back the price of the prescription?

Mr T J Scofield—Oh, I object to that if the Court please

The Witness *A*—Did I give her back the price of it?

M Hough Q—You will won t you? *A*—If she should ask me I would gladly give her back But I gave her more than $2 worth of service I assure you I didn t charge her for the telephone calls Let us call that square on the prescription

Q—You mean you didn t charge her for the prescription then you charged her for talking to her? *A*—Oh yes, I get a lot of money for that

Q—When the husband telephoned to you what language did he use? *A*—I really don t know It may have been English or German I understand both equally well

Q—Did I ask you if you were continuing to attend her? *A*—Yes she is on my book I haven t heard from her She may have had her abortion and called in a local doctor That often happens Or she may be well and may have her abortion later and I may be called That class of patients are very uncertain They leave one doctor very often for another

Dr De Lee was asked to define eclampsia and state its causes He stated that the cause is said to be a poison or toxin The exact chemical nature of the poison is not understood

Q—Now under the head of eclampsia on page 362 of your book is this statement

> Eclampsia and allied conditions It is impossible to classify these diseases because the causes are unknown"

That is a correct statement is it? *A*—Oh yes in a general way I think it is impossible to classify disease

Q—At least it was a correct statement when you wrote the book? *A*—Yes it must have been or I probably would not have put it in

Q—Now since hearing Dr Kay testify on the stand yesterday you know what the causes are, don't you?

Mr T J Scofield—I object to that, if the Court please

THE COURT—Objection sustained

Mr T J Scofield—He is testifying from his own experience

Mr Hough Q—You heard Dr Kay testify? *A*—I heard Dr Kay Very good testimony

Q—You heard the testimony? *A*—Yes pretty good testimony

Q—You heard him testify as to the causes of eclampsia didn't you? *A*—He said something about constipation causing eclampsia. I thought I mentioned that too as one of the causes

The witness was then asked whether extractives from viburnum prunifolium could be of any benefit in eclampsia He stated that they could be of the slightest imaginable benefit He stated that he did not believe that 48 drops of alcohol three times a day would produce eclampsia, but he recited a case in which larger doses of alcohol did produce eclampsia He stated that there is authority for believing that alcohol should not be taken during pregnancy He was asked whether or not there is more eclampsia in Europe He stated he did not know that there was He stated that there was perhaps one case of eclampsia in 600 cases, but that statistics vary In Baltimore, for example, there is more eclampsia

The witness was then asked as to his knowledge of the treatment prescribed in the Home Treatment Book. He stated that he knew in a general way that the knee-chest position is recommended and keeping the bowels open He is not so expert on the Home Treatment Book as he is on his own book He understood from the Home Treatment Book that without taking Wine of Cardui a treatment could not do very much good

The witness was then asked as to his treatment of threatened abortion He defined habit-forming drugs and as the greatest habit-forming drug he mentioned alcohol He was then read extracts from the Home Treatment Book prescribing the diet suitable for the first months of pregnancy and stated that it is a very liberal dietary, but certain pregnant women ought not to be put on that diet

THE MIDWIFE

Q—Doctor, is a midwife an obstetrician? *A*—Is a midwife an obstetrician? In the olden times before we had obstetricians the midwives did the work and they got various names and the first was "The midwife which means a wife that stands midway between the husband and the real wife She was a mid wife In the olden times the husbands took care of the babies They were delivered sitting on the husband's lap Then came the midwife and they sat on her lap and in the 16th and 17th century the French midwives were called *sage femme* meaning wise woman They were also called *accoucheuse* which means to put a woman in bed

When the men in the beginning of the 16th or 17th century began to dabble in this particular branch (they had before but not to any particular extent) they chose the name accoucheur which means a man that puts a woman to bed In England they were called 'men midwives, but the men did not like that so they decided they ought to be called something else and they selected the word obstetrician which comes from the Latin word obstetrix to protect or assist and the Latin word 'status,' to stand as a protection. And I might say that that meaning of the word obstetrician is not sufficiently understood and practiced The obstetrician s business is to protect the patient from dangers threatening her and the baby

A great many men think that it is their business to help some woman out of trouble and of course it is to the extent of protecting them from trouble, but they give medicines and things which are not necessary So you see the origin of the word obstetrician '

Now, whether a midwife should be entitled to the term 'obstetrician would depend on how you take my description Her antiquity would certainly entitle her to a great deal of honor but her actual capacity nowadays would not entitle her to any high degree of honor

Q—You mean unless they have had some education along the lines of that subject? *A*—Oh no The usual obstetrician or the usual midwife of today, is a very ignorant, unconscientious and really impossible person the usual one

Q—They graduate then don t they? *A*—They do in Europe, and they have some schools for midwives but the class of women who undertake the study is not of a high grade and they forget very rapidly

Q—They graduate then in America? *A*—There is only one midwife s school in America of any standing whatever and that is the Bellevue Hospital in New York.

He was then asked some general questions as to the status of obstetrics in this country today

TESTIMONY OF DR. G FRANK LYDSTON

Dr G Frank Lydston was called as witness for the defendants

DIRECT EXAMINATION BY MR T J SCOFIELD

Dr G Frank Lydston has been practicing medicine for 37 years He is a graduate of Bellevue Hospital, New York He served at the State Hospital in New York, on Blackwell's Island, in the penitentiary hospital, and had for six months charge of the maternity service at Blackwell's Island He also served for a time as resident surgeon at the State Immigration Hospital, Ward's Island, New York For 30 years he was connected with the College of Physicians and Surgeons, of Chicago, as a professor in the Department of Diseases of the Genito-Urinary Organs He has seen perhaps from thirty thousand to fifty thousand cases in his practice and has written various articles on his subject

Dr Lydston defined inflammation and their causes and named some of the various bacteria which produce inflammations He mentioned some of the most common organisms which he finds in his practice gonococcus, colon bacillus and the spirochete He was asked to describe gonorrhea in the female The counsel for the plaintiffs admitted there would be no dispute on this question so that the answer was passed He was then asked to describe the syphilitic infection in the female, which was described extensively He described syphilis of the neck of the womb and defined leukorrhea as a symptom of a disease He has not had any experience with cnicus benedictus or viburnum prunifolium

The witness was then asked a hypothetical question similar to those asked of other witness and whether a hypothetical medicine such as had been described would cure inflammations of the female genital organs He stated that it was his opinion that it would not

Q —Why not, Doctor? *A* —Simply because, as you have read the hypothetical question involving this particular drug or preparation, you have shown nothing that would have any effect upon the cause of gonorrhea

Q —The cause of gonorrhea being what, Doctor? *A* —The cause of gonorrhea being a micro organism that would not be reached by this remedy taken internally, even though the remedy had any germicidal properties, which, in my opinion, it has not

Q —Now, Doctor, in reference to gonorrhea in women, I will ask you this question, whether this hypothetical medicinal solution which I will ask you to assume corresponds to Wine of Cardui, will act upon the cause of the disease and is, therefore, not a mere palliative, but a scientific and specific remedy, with a curative effect upon the seat of the trouble?

Mr Hough —What are you reading from, Judge?

Mr T J Scofield —From the Cardui Home Treatment, page, I think, 6

Q —Have you an opinion, Doctor, on that subject? *A* —I have

Q —What is that opinion? *A* —That it will not

Q —Doctor, what would be the effect, if any, of the alcohol content of such a medicine upon the gonorrheal condition—upon the condition of gonorrhea? *A* —That would depend largely upon what complications existed, and it would depend also upon the amount that was given You have stated how much there was in the single dose, but you have said nothing about how frequently it is given

Q —Yes The doses being repeated from three to four times every day *A* —In my opinion, the alcohol content would be injurious

Q —In what way, Doctor, and in what complications? That is a double question, perhaps *A* —Well, take for example the infective inflammation resulting from gonorrhea of the uterus It would tend to increase congestion tend to increase nervous excitability and sensibility, and in that way would lessen the resistance of the tissues to the inroads of the germ Anything which tends to produce congestion in the presence of infectious micro organisms almost invariably tends to increase the virulency of the infection, make it worse

The witness was then asked particularly concerning the effects of the hypothetical medicine on syphilitic infection Objection was made to the question, and, after argument, he was asked whether the hypothetical medicine would have effect on any inflammation of the womb He stated that in his opinion it would not have a beneficial effect

Q —Would it make any difference in answering your question—in your answer Doctor, whether the inflammation was produced from syphilitic causes or other causes? *A* —It would make a difference in this respect, that the use of that particular remedy, this hypothetical solution, would be even more illogical in the case of a syphilitic inflammation or ulcer of the neck of the womb, than it would be in other conditions—conditions from other causes—and it would be more likely to be injurious

There was then read to the witness a section from the Ladies' Birthday Almanac for 1913, concerning pain in the small of the back and the witness was asked to state two or three conditions which come in the line of his special work which might cause such a pain

PAIN IN THE BACK

A —Pain in the back is not a disease, but a symptom of a multiplicity of diseases It may not be a symptom of any one or more of a multiplicity of diseases, not only two or three, but a large number, and especially in the female, for example, all sorts of displacements of the uterus, anything that increases the weight of the uterus and brings tension to bear upon the ligaments or supports of the uterus is very likely to produce pain in the back That is a very frequent symptom And it may produce pain in the back not only by its direct dragging, but by its reflex effect upon the nerves supplying the back, and the reflex effect upon the nervous system in general

Abscesses in the pelvis, abscesses in the fallopian tubes, chronic inflammatory conditions of the pelvis, tumors of the pelvis, cancer of the ovaries, cancer of the uterus, cancer of the tubes, cancer of the cervix, cancer of the vagina, cancer or hemorrhoids or any other morbid condition of the rectum

Cancer of the bladder may produce it, stone in the bladder may produce it, inflammation of the bladder may produce it, gonorrheal infection may produce it in two ways, by increasing the weight and producing irritation of the uterus in one way, and it may produce it in the other way by infection through the blood, producing it in that way, affecting the muscles of the back, the sheaths of the muscles of the back, the tendons of the muscles of the back and ligaments of the spine

It may result from stone in the bladder, or stone in the ureter, particularly a stone in the ureter, a stone in the pelvis of the kidney It may result from sarcoma or a cancer of the kidney or a stone in the kidney It may result, and very frequently does in women, from a displacement of the kidney

That is about all I can think of offhand There are some more, I suppose

Q —Doctor, can you tell now—

Mr Walker —What is the matter with lumbago? Isn't that one?

Mr T J Scofield —Can you tell from the description of the pain—

The Witness —I should speak of rheumatism of the back Lumbago is not definite

Mr T J Scofield *Q* —Can you tell from the description of the pain, as described in the Birthday Almanac what the cause of that pain is—from the description given there—could you diagnose the condition, and tell the cause of the trouble, without examination?

Mr Hough —Objected to as incompetent, irrelevant and immaterial

The Court —He may answer

To which ruling of the Court the plaintiffs, etc, excepted

The Witness —No sir, I could not I don't think that any scientific physician would undertake to make a diagnosis of any condition merely from the symptom of pain in the back

Mr T J Scofield *Q* —Doctor what in your opinion would be the effect of the hypothetical and medicinal solution which I have described to you, assuming that it corresponds to Wine of Cardui, in the treatment of this pain in the back? *A* —Well, I think from the position of it, if it were given freely, that there might be some temporary alleviation of the pain, by virtue of the effect of the alcohol

Q —Where it is given, of course, in the doses I have already referred to *A* —I should think that might be so, yes I should think, however, the secondary effect of the alcohol—in fact, I am confident it would be in the majority of these cases, if not all the instances I stated, be injurious, particularly so where there is any inflammation of the urinary way, where a very small quantity of alcohol may result in extreme irritation

Mr T J Scofield *Q* —Now, Doctor, would it have any effect on the underlying cause of the pain, whatever that underlying cause might be? *A* —In my opinion it would not

The case was then adjourned until 2 o'clock the same day

April 21, 1916, Afternoon

The Court met pursuant to adjournment After discussion the Court adjourned until Tuesday Morning, April 25, 10 a m

April 25, 1916, Morning

TESTIMONY OF DR G FRANK LYDSTON (*continued*)

Dr G Frank Lydston resumed the stand in behalf of the defendants

CROSS-EXAMINATION BY MR HOUGH

Dr Lydston was asked as to the best treatment for gonorrheal infection He outlined what he would do in the case of a woman patient afflicted with gonorrhea He outlined the diagnosis, describing the use of the microscope and mentioned the use of the complement fixation test If the case was in its incipiency he would hope to cut the disease short by germicidal drugs, for example, permanganate of potassium varying in strength from one to five thousand to one in one thousand Douches should be given in the recumbent position with large quantities of hot water He would advise the patient concerning the danger of infecting others, particularly with relation to danger from gonorrheal conjunctivitis He would say to the patient "You must avoid absolutely stimulants of all kinds, even tea and coffee You must avoid all sorts of excitement particularly of a sexual character The best thing that you could do, would be to rest quietly in bed" If the disease had reached a moderate start, he would advise the patient to rest in bed in order to avoid a number of very serious complications which he mentioned If the patient were depleted he would prescribe tonics containing iron, arsenic, etc., and perhaps bitter infusions of quassia, columbo or gentian If the patient suffered from sleeplessness he would prescribe such sedatives as bromids and gelsemium, or small doses of chloral and veronal He would prescribe prolonged sitz baths He would attend to the condition of the bowels, it there was fever he would attend to that by appropriate remedies. The treatment would be directed chiefly toward destruction of the gonococcus

The witness would consider also the question of infection of Bartholin's glands, which he described He also described endometritis and its treatment, and spoke of extension of the inflammation to the fallopian tubes, with the formation of pyosalpinx

He then considered secondary peritonitis and appendicitis and discussed a case of this character in which he had recently performed an operation

He was then asked whether gonorrhea ever produced vaginitis He replied that vaginitis in gonorrhea is not an important element, more important are secondary infections of the glands, etc. He was asked whether he ever treated gonorrheal infection by simply keeping the parts clean He had not done so but practically always prescribed an antiseptic douche unless there were distinct contraindications

Q—Now, you stated the micro-organisms to be the cause of these infections Is it not also the nonresistance of the tissues does not that have something to do with it? *A*—That is obvious if the tissues were resistant to the micro-organisms we would never have any disease at all.

Q—And it is possible— *A*—And you would not eat unless you were hungry either

Q—Is it not possible to so strengthen the resistance of the tissues as that they can oppose the micro-organism? *A*—You are speaking of strengthening the tissues in general? We can so increase—we cannot increase the resistance of the tissues we have no method of increasing the resistance of the tissues so that we could be certain that we could prevent the inroads or action of any micro-organism pathogenic micro organism disease producing micro organism but we can relatively increase the resistance in reference to many of them

For instance tuberculosis A lack of resistance to the tubercular—the bacillus tuberculosis or the germ of tuberculosis or consumption, is the primary condition That, however is an entirely different thing. There is nothing particularly virulent about the tubercular micro organism as compared with this

Q—Would that be true in cases of gonorrhea? *A*—I am going to give that In the case of gonorrhea I don t care how you may increase the resistance I don t care how you may lower the resistance Whenever a virulent gonococcus attacks your mucous membrane—good night You are going to have gonorrhea, and that is all there is to it

Dr Lydston stated that everyone who is exposed to gonorrhea does not become infected because of resistance of the tissues and variations in susceptibility

Dr Lydston described leukocytes and their relation to combating infection Hyperemia in the beginning of infection would tend to aid the conditions, but is rapidly superseded by congestion which is not beneficial

Dr Lydston stated that he sometimes prescribes tincture of gelsemium, but that he does not know the exact alcohol content of it. He gives quassia in the form of infusion He gives digitalis in the form of infusion He stated that it is not necessary that the infusion contain alcohol

Q—When you prescribe medicine Doctor don't you pay any attention to whether there is alcohol in it or not? *A*—I might or I might not That depends entirely on the condition for which I prescribe the medicine the complications and the amount of alcohol in the preparation the frequency of the dose and the duration of the treatment I will state incidentally however that I avoid alcoholic preparations wherever I can

Q—Here is a preparation that you prescribe or that you recommend containing fluidextract of ergot tincture of gelsemium potassium bromid hyoscyamus aurantii do you know how much alcohol there is in that preparation? Now once again what is it? I will just let you read it (Handing book to witness) *A*—Thank you very much I was about to ask for that book I have not seen it for a long time

Q—You will find the prescription referred to on page 141 of your book *A*—(Examining book) Well you have helped me out here you have gotten it all written out

Q—I did not intend to give you any help but you can take advantage of it if you like. *A*—Oh I don t care to take advantage of it Something like 25 minims it would figure up

Dr Lydston did not consider that the alcohol in this prescription had any deleterious effect, as the bromid present was an antidote

Q—Would that amount of alcohol be cumulative, so that its effect would run over to the next dose? *A*—You mean cumulative in that it would stay in the system?

Q—Yes *A*—I have my serious doubts of it, but the effect of it would be cumulative

Q—That is, the beneficial effect would be cumulative? *A*—Let us speak of the deleterious effect, please

Q—Well would the deleterious effect be cumulative? *A*—It would

Q—So that the time you gave the second dose of it it is worse than the time you gave the first? *A*—Please stick to your question and don t try to trap me because I am not here for that purpose, Mr Hough

Q—I don t want to trap you *A*—You are trying to, and there is no use in it because you and I are reasonable men I am not going to lay any traps for you

Q—I am not trying to lay any trap for you *A*—The deleterious effect of the alcohol given as alcohol in 25 minim doses, either in one dose or however many times a day, if you will put your question in that way, then I will answer it

Q—Why not answer me whether the time you gave it, the second dose it would be worse in its effects than when you gave the first dose? *A*—Are you speaking of that prescription or the alcohol?

Q—I am speaking of the alcohol in this prescription *A*—I have already eliminated that prescription and told you that the alcohol in it produced no injury in that at all

Dr Lydston was repeatedly cross-examined concerning the action of the alcohol and the bromid in the prescription mentioned

Q—How can you say if you know nothing about viburnum prunifolium and carduus benedictus that it might not counteract the effect of alcohol as well as the bromid? *A*—I do not believe that I said that did I? Did we take that up?

Q—Didn t you state— *A*—I was asked whether I had ever used those preparations I believe, and I was asked whether those preparations would cure gonorrhea I said that preparation would not cure gonorrhea and I stated my reason

Q—Didn t you say that the amount of alcohol in there was absolutely dangerous, on account of the inflammation? *A*—I did

Q—Well then, how can you say that it would be dangerous or would not be dangerous, without knowing whether or not the viburnum prunifolium or the carduus benedictus might not act on the alcohol the same as the bromid does on your alcohol? *A*—Because bromid of potassium is a very powerful sedative a very powerful sedative and as I remember, the hypothetical question there was nothing said about this remedy being a powerful sedative. Somewhat sedative

Numerous questions were asked in relation to the hypothetical question and the amount of cnicin, carduus benedictus and viburnum in it in their relation to the alcohol

Dr Lydston testified that he has prescribed Hayden's Viburnum Compound perhaps half dozen times years ago

Q—In what case did you prescribe it? *A*—I prescribed that several times before I was advised of its composition under the inference that it contained viburnum I do not now think it does—and I am sure that it does not. I think I prescribed it in a case of ovarian neuralgia or something of that sort I prescribed it very infrequently

Q—Well you prescribed it for young girls for amenorrhea, haven't you? *A*—No I don t think I ever did

Q—Are you positive of that now? *A*—I am not sure.

Q—You won't say you have not? *A*—I don t recall it. No, I would not say I have not. No I would not say that, because I have used Hayden s Viburnum Compound on a moderate number of occasions—very little of recent years

Q—I hand you a bottle, and ask you if that is the medicine referred to? *A*—Yes that is Hayden s Viburnum Compound (Examining bottle)

Q—What is the percentage of alcohol? *A*—Fifty per cent.

Q—Without reference to whether you knew what the other ingredients were, you did know that it contained 50 per cent. of alcohol didn t you? *A*—No, I did not

Q—You did not even know that? *A*—I did not I have never seen the label of Hayden s Viburnum Compound since the Pure Food Act compelled them to put the percentage of alcohol on it.

Q—How long have you used medicines without knowing what the ingredients were? *A*—Oh I very seldom have used medicine without knowing what the ingredients were I cannot however always be absolutely certain as to a preparation and we have to take even our official remedies—we have to take them very often without absolutely investigating to see what the proportion of this and that and the other is excepting as regards the active principles

Q—Doctor are you the author of a brochure entitled 'Why the Medical Association is Going Backwards, A Critique of the Medical Trust?

Mr T J Scofield—That is objected to

Mr Hough—He has testified that he is the author of certain publications

The Court—Has this anything to do with this case?

Mr Hough—I think it has, your Honor, I think it has a good deal to do with the case.

Mr T J Scofield —It is not cross-examination, and it is utterly immaterial

Mr Hough —Can't I identify these by this witness?

Mr T J Scofield —Wait until I get through It is an effort to bring in here an immaterial issue into this case, that is entirely collateral and it would require, if there is any investigation of it, going out a good distance, far afield

Mr Hough —I should like to identify those two pamphlets by the witness (Handing pamphlets to the Court)

The Court —Yes, he may identify them I do not see at this time that they are competent

To which ruling of the Court in permitting the identification of said pamphlets, the defendants, etc, excepted

The Court —And of course it is understood that no use shall be made of the titles of those unless they are received in evidence

Mr Hough —Yes

Q —Is that the name of it? *A* —It is

Q —And you said you were the author of that? *A* —I am

(The pamphlet referred to is marked Plaintiff's Exhibit A April 24, 1916)

Q —And you are also the author of that pamphlet entitled "How Simmons, Our Peerless Leader, Became Regular"? *A* —I am

Q —Is that a copy of the brochure? *A* —It is (Having examined pamphlet)

(The pamphlet last above identified is marked Plaintiff's Exhibit B April 24, 1916)

REDIRECT EXAMINATION BY MR SCOFIELD

On redirect examination Mr Scofield asked Dr Lydston to explain the use periods of dosage, and the number of doses per day of the prescription read by Mr Hough He stated that the book was written in 1899 and the prescription ordered one dose at bed time to get the sedative effect of the bromid and hyoscyamus

TESTIMONY OF DR W W CORNAG

Dr Cornag was called as witness for the defendants

DIRECT EXAMINATION BY MR WALDO

Dr W W Cornag testified that he has been practicing medicine for twenty-six years in Lavonia Ga He has had some experience with McElree's Wine of Cardui He was called to see a Mrs J S She related that she was suffering with falling of the womb and hemorrhage pains in the pelvic organs and in the back She had been taking Wine of Cardui for about a year without relief He made a pelvic examination and found her womb down to a small extent, enlarged, and there was a slight hemorrhage that had been going on at irregular intervals He advised her to have an operation A surgeon was called and he suspected there might be cancer of the womb At the time of operation the surgeon found what he thought was the beginning of a cancer of the uterus and a small cyst of the ovary He amputated the body of the uterus and removed the cyst The woman has been in good health since

Mrs G R told the witness that her menstruation had stopped for a year and she had been gradually getting weaker She thought she had some uterine trouble and had been taking Wine of Cardui, but without relief He found that her weakness and suppression of menstruation was due to consumption The woman died of this disease about four months after he first saw her Mrs G R told him that she had taken several bottles of Wine of Cardui for about a year

Mr McW was a patient of the witness for alcoholism This patient stated that when he could not get whisky, he would drink Wine of Cardui The occurrence was seven or eight years ago The witness saw McW drink perhaps one-fourth of a bottle on one occasion

The witness stated that he was called to see Mrs Y, who was complaining of pains in the region of the uterus, with burning sensations, pains in the back, and whites On pelvic examination he found a gonorrheal infection of the womb and tubes This patient stated that she had been taking Wine of Cardui off and on and she had been ill for eighteen months He treated her for a heart disturbance The patient died about two weeks ago of pneumonia

Another patient, Mrs C R, complained of pains in the pelvic region, painful menstruation and whites He found on examination that she had a syphilitic ulcer of the mouth of the womb The patient stated that she had taken Wine of Cardui without being relieved He was able to get her in pretty good shape with specific treatment for syphilis

Another patient was F M, who complained of scanty, irregular and painful menstruation and sterility, for which she had taken Wine of Cardui, without relief On examination he found that the mouth of the womb was small—there was no diseased condition He advised her to have an operation which she refused

CROSS-EXAMINATION BY MR WALKER

On cross-examination the witness testified that he came to Chicago about four weeks ago He received a notice from the secretary of the state medical society asking if he knew anything about the use of Wine of Cardui, and later he met Dr Heizer in Atlanta, Ga The witness is a member of the American Medical Association He has not resubscribed for The Journal, which he has taken off and on at various periods He understands that his expenses will be paid and that he will receive a reasonable per diem for the time lost during his attendance in Chicago

He was repeatedly cross-examined concerning the names and addresses of his patients and he promised to give this information to the counsel for the plaintiff He was also repeatedly examined concerning the incidents described in the direct testimony

Q —Doctor, do you keep a drug store? *A* —Yes, sir

Q —At Lavonia? *A* —Yes, sir

Q —You still run it? *A* —Yes, sir

Q —How long a time have you been running a drug store? *A* —Ten years about

Q —During all the time that you were treating the patients that you have named here, you had that drug store? *A* —Yes

Q —Who is taking care of your drug store, and of your business? *A* —My daughter is in charge of it

Q —She is a pharmacist, is she? *A* —No, sir, I don't run a prescription business I run a retail 'patent medicine' and stationery business

Q —You sell 'patent medicines"? *A* —And carry my own pharmaceuticals

Q —Well, do you sell Peruna? *A* —Oh, yes, sir

Q —Lemon Extract? *A* —Yes

Q —Aletris Cordial? *A* —No, sir

Q —Hayden's Viburnum Compound? *A* —No

Q —You don't sell anything that doctors ask for on prescription? *A* —I don't fill prescriptions I am not licensed

Q —Do you carry Lydia Pinkham? *A* —Yes, sir

Q —Her remedy? *A* —Yes, sir

Q —What others? *A* —Wine of Cardui

Q —How long have you carried Wine of Cardui? *A* —Oh, about eight or nine years

Q —What others? *A* —I don't know I have got—

Q —Duffy s Pure Malt Whiskey? *A* —Sir?

Q —Duffy s Pure Malt Whiskey? *A* —No, they would not let me sell that in my town

Q —Hostetter's Bitters? *A* —No

Q —What other medicines, besides those named? *A* —I got Harder s Iron Tonic

Q —How much alcohol is in that, do you know? *A* —I do not know

Q —What else? *A* —I could not tell you, just a small line of patent medicines that people ask for mostly, that is all

Q —Do you carry any drugs yourself? *A* —I carry my pharmaceuticals, that I use in my practice

Q —What school did you graduate from? *A* —Atlanta Medical

Q —What is that, Regular? *A* —Yes

The witness was then asked questions regarding the various sects in medicine He was asked concerning the disposition of his practice while he was attending the trial in Chicago and questioned in detail concerning his treatment of Mrs Y, who suffered with gonorrhea He gave her an astringent douche, digitalis and salines He also gave her Blaud's pills He did not prescribe "Cardoseptic"

Q —You mentioned some iron remedy that you keep there, some patent or proprietary medicine? *A* —Harder s Iron Tonic

Q —Did you give her that? *A* —No sir, I don't prescribe patents

Q —How much alcohol was in that? Well, you recommend them, don't you? *A* —No, sir, I do not

Q —You just sell them? *A* —Yes, I sell them, when they ask for them

The witness was then questioned in detail concerning the case of Mrs C R, who had syphilis He treated her with mercury and iodids, and prescribed an antiseptic douche.

The witness was then asked if he recognized the signature of Mr McW He could not identify the signature

Q—He told you that when he could not get whisky, he would take anything that had it in it? *A*—He preferred Wine of Cardui

Q—Did he also tell you that he would take anything that had alcohol in it? *A*—Well, he said he had to have alcohol

Q—Did he buy it of you? *A*—Yes he did

Q—Over what length of time had be bought Wine of Cardui from you? *A*—He was the first man that ever I knew of buying a bottle in my place for intoxicating purposes and right then I instructed my clerk not to sell him any more

Q—When did he first buy Wine of Cardui from you? *A*—It was about seven years ago

Q—You say be bought it then for intoxicating purposes? *A*—He did

Q—How did you know that? *A*—He told me he did

Q—Did he drink it there in your store? *A*—No he drank it in his room

Q—Is that the occasion that you saw him drink a quarter of a bottle? *A*—Yes

Q—How much did he buy? *A*—That one bottle, is all I can testify to

Q—Had he bought Wine of Cardui before? *A*—I think he had

Q—Is that the reason that you think—that is the first time you knew he bought it to drink himself? *A*—It is the first time I knew anybody was using it for that purpose in my community

Q—How long had you carried it then? *A*—I had carried it about three years

Q—When was the last time you sold McW any? *A*—That was the last time I think

Q—Has McW ever purchased any for his wife or daughter? *A*—He has not got a wife

Q—Has he got a daughter? *A*—No sir never has been married

Q—Does he live with his sisters? *A*—No he was boarding at a *hotel*

Q—A hotel in the town where you are? *A*—Yes

Q—What hotel? *A*—The Lavonia Hotel

Q—Did you have a clerk at your store? *A*—Yes sir

Q—Other than your daughter? *A*—Yes sir

Q—Seven years ago? *A*—Yes sir

Q—Who? *A*—J T Holland

Q—How long did he work for you? *A*—He worked for me about three or four years

Q—When did he quit? *A*—About a year ago is the last time he has been with *me*

Q—What is his full name? *A*—John T Holland

Q—Where does he live? *A*—At Lavonia

Q—Is he there now? *A*—He is the man that sold McW this bottle of Wine of Cardui He asked McW why he was buying it and he says—

Q—There is no question pending Did you see McW drink that bottle? *A*—Yes he drank part of it

Q—Were you there when he drank it—when he bought it? *A*—No

Q—Well did this clerk that was working for you see him drink it? *A*—No sir

Q—How did you come to see him drink it? *A*—I was called out to his room that evening

Q—At the hotel? *A*—Yes sir

Q—And you went over to the hotel? *A*—Yes sir

Q—Who told you the conversation that he had between the clerk—*A*—The clerk

Q—Well what was it he said? *A*—I asked the clerk if he had not made a mistake in charging it wasn t it a mistake about him getting that bottle of Wine of Cardui I saw it on the book there and he says No he come in here and went behind the counter and looked around the shelves and he pulled down a bottle of Wine of Cardui and told me to charge it to him I asked him what he was buying that stuff for and he says I am buying it because it has got more alcohol in it than anything on that shelf' That is what the clerk told me

The witness stated that he sold about eighteen bottles of Wine of Cardui a year

Whereupon the further hearing of the case was adjourned until 2 o clock the same day

April 24, 1916, Afternoon

TESTIMONY OF DR. ALONZO C TENNEY

Dr Alonzo C Tenney was called as a witness for the defendant

DIRECT EXAMINATION BY MR T J SCOFIELD

Dr Tenney testified that he is a practicing physician residing in Chicago He graduated at the Hahnemann Medical College in 1895 He is a homeopathic practitioner After graduation, he spent a year as intern at the Hahnemann Hospital He is a member of many homeopathic medical societies and has held office in practically all of them He has done postgraduate work at the University of Chicago, the Chicago Clinical School, the Chicago School of Electro-Therapeutics, the Graduate School of Harvard University and the New York Postgraduate School

Q—Doctor, will you explain what are the fundamental principles of the law of similars, the homeopathic law, as I understand it, of drugs and cure? *A*—I did not quite get the first part of that question

Q—Doctor what are the fundamental principles of the law of similars? *A*—The homeopathic practice is based upon what we call the law of similars That law is exemplified in this way We give the drug that we want to learn about to a healthy human being This healthy human being we call a prover And the conditions which are produced in his body or her body as the result of the administration of a drug, we call a proving These provings are shown by symptoms, or they are results recorded by symptoms changes in the feelings and condition of the prover that is our guide to the administration of a drug When we find in a sick person a set of symptoms produced by a disease which are the parallel of a set of symptoms which we have produced artificially by the administration of some drug we think of that drug as the one which will produce changes in the patient s body leading to recovery Now, in proving our drug we give material doses that is we give big doses. We begin carefully and keep on increasing and increasing the dose, always being careful not to poison the person fatally This work has not been done much of recent years

But when we come to prescribe for a sick person we do not use a large quantity of the drug We use very small quantities And now here is a second point in our belief A drug may be so altered we believe by dilution, by attenuation by grinding up with sugar of milk or diluted with alcohol and water to such an extent that its molecular parts are separated and that the chemical affinities which exist in that drug become active in the human body to cure disease A more recent method of describing this process is to refer to what is known as the ionic theory but that is a rather complicated thing and I do not think it is necessary

Q—All right Doctor are you familiar with the homeopathic method for prescribing viburnum prunifolium? *A*—No I am not

Q—Why not, Doctor? *A*—Because viburnum prunifolium has never been proven It has never been tested on a healthy human body, and there can be no homeopathic basis without this preliminary knowledge of the drug s action

Q—Then you are not familiar with the indications for that drug? *A*—No there are no homeopathic indications for it It has never been proven

Q—Now in your experience of 20 years or more in the practice of medicine have you ever used viburnum prunifolium? *A*—Yes, I have used it empirically on the ground given me when I was a student.

Q—To what extent have you used it Doctor? *A*—Well when I first began practicing over 20 years ago I used it quite frequently It was then given in the books on materia medica as a drug for certain ailments with which women were suffering I used it repeatedly I had no results from it It proved absolutely worthless in my hands and very unfortunately so

Q—Doctor are you familiar with the homeopathic method of prescribing cnicus benedictus? *A*—Yes I am

Q—Upon what are these indications based? *A*—They are based upon the provings of cnicus benedictus

Q—Well are you familiar with what you call the provings the homeopathic provings of cnicus benedictus? *A*—Yes I am familiar with those provings.

Q—Now what do those provings show Doctor with reference to the effect of the drug upon the reproductive organs of the female? *A*—It shows no effect upon the pelvic organs at all

Q—Well then, what are your conclusions with reference to the clinical value of this drug in the treatment of pelvic diseases of women? *A*—My conclusions are that the provings of this drug do not point to them at all, and that it could have no basis in homeopathy whatever for prescription in that condition in that class of diseases or ailments pelvic troubles

Q—Doctor according to the homeopathic theory of medicine should drugs ever be used in combination? *A*—No we give according to our strict homeopathic theory only one drug at *a time*

Q—Now take these two drugs which I have mentioned namely viburnum and cnicus benedictus and suppose these drugs are used in doses of approximately three grains of the extractives from the bark of viburnum prunifolium, and the extractives from approximately 30 grains of cnicus benedictus and that they are *combined in these* proportions with 48 drops of alcohol to each dose of a tablespoonful in your opinion could such a combination be used for the treatment of pelvic disorders of women on the homeopathic theory of practice? *A*—No absolutely not on the homeopathic theory

Q—Now explain why *A*—Well to begin with we have no proving of one of them so we do not know what is its field of action In the second place we are given drugs in combination and even if we credit these two drugs with the virtues which in some instances they are supposed to have their field of action is different one affects *one* set of organs the other if it affects anything affects another set of organs There would be no excuse according to our homeopathic theory and practice and experience to combine these drugs. In the *third place* they are made with a twenty per cent alcohol as I understand the question Now our homeopathic tinctures are made with a much stronger amount of alcohol they are made with the strongest alcohol used in ordinary pharmaceutical work running 93 per cent. by weight and 98 per cent. by volume pure alcohol That alcohol with our homeopathic tinctures will extract resins and other alcoholic extract Therefore, our provings of cnicus benedictus would be provings of an entirely different substance from a 20 per cent alcoholic extract of cnicus benedictus It would have things in it which would not and could not by any stretch of the imagination be in this hypothetical solution

The homeopathic method of prescribing is different. We use the drug in attenuations. The dose here would be altogether too large to have any of the therapeutic effects which we expect to get by the administration of our drugs homeopathically And it occurs to me that there would be serious doubt whether the dose is large enough to have the physiologic effect which we sometimes endeavor to get. So on every count there is no possible application of this substance you have described in homeopathic practice

Q—Now, Doctor, you have stated that on the strict theory of homeopathic practice medicines are not given in combination In actual practice do conditions ever arise under which you do prescribe drugs in combination? *A*—Yes, such conditions do arise

Q—Explain why and under what circumstances? *A*—Sometimes we want to physic a patient, we want to stimulate the kidneys, we want to quiet the nervous system Take a physic, for instance, to illustrate the point We might use what is prepared by our homeopathic pharmacists for that purpose a combination of two or three or four drugs, all of which act upon the liver of the intestines and the liver, but using small doses of each individual drug so as to avoid any of its poisonous effects and combining it with other drugs acting upon the same organ or related organs to get nothing but the stimulative, laxative effect In that way we may use drugs in combination

The witness was then asked a hypothetical question similar to that asked of previous witnesses and he stated that he had an opinion as to the physiologic action and therapeutic value of the hypothetical medicine on the homeopathic theory of practice He stated that there was no foundation whatever for this hypothetic prescription

Q—Well, now, a little more in detail Doctor In what way, Doctor, does it fail to comply with the principles of homeopathy? *A*—It is not a tincture, to begin with It is not a homeopathic tincture There is a 20 per cent solution, 20 per cent alcoholic extract of the drug prescribed in it—or of these two drugs There are two drugs combined, which is antagonistic to the homeopathic practice There is no proving The dose is too large for the homeopathic effect and even if we credit the cnicus benedictus here with having the same effect as we would if it were a homeopathic tincture, it is faulty because it is a combination of two drugs at the same time, and as I have already said, the tincture derived homeopathically by the homeopathic pharmacist would be an entirely different substance from that described here

Dr Tenney stated that the hypothetic medicine could not affect gonorrhea either in acting on the germ or through any action on the tissues of the body He stated that it would not have any effect on uterine prolapse nor would it cure retroversion or retroflexion nor sterility nor menorrhagia nor metrorrhagia

A—In dysmenorrhea there could be no effect on any of the causes which I have in mind for dysmenorrhea except possibly the effect of the alcohol, the same as when a patient takes a little hot gin for a painful menstrual period, something of that sort.

The hypothetic medicine, he stated, would not cure amenorrhea and there is no occasion for its use in puberty or in pregnancy Such a medicine could not be used according to the homeopathic school as no routine prescriptions are used by that school Dr Tenney described the method of preparing homeopathic tinctures

CROSS-EXAMINATION BY MR HOUGH

On cross-examaniation, Dr Tenney stated that in a dosage of 5 drops of alcohol and one one-thousandth part of viburnum, the dose would be given perhaps at intervals of fifteen minutes for one hour or two and then gradually lengthening the interval to two hours, three hours, etc, but it is not practicable to give such large doses The effect of those doses would be that of alcohol only as though no viburnum was present He stated that the fact of a drug appearing in the homeopathic pharmacopeia means that the druggist has it to sell The publication of the drug does not mean that it has been proven He described the use of the homeopathic pharmacopeia of 1914 and stated that like himself, the great majority of homeopathic physicians with whom he is acquainted have discarded viburnum prunifolium He has prescribed carduus benedictus a few times and it gave no good results, so he discontinued its use In place of carduus benedictus he uses mercurius corrosivus, mercurius dulcis, mercurius iodatus There is no alcohol in these preparations They are reduced to the third X with sugar of milk Among other remedies which contain alcohol he uses gelsemium, bryonia, chelidonium Lycopodium which he gives is prepared in powder

The witness stated that he has never made provings of any drug, if the drug is mentioned in a textbook, appeals to him, he tries it

Q—Well, to commence with, all you know about it is what your literature, that is, homeopathic literature, shows to have been proven, don't you? *A*—Well, the literature does not always show things to have been proven, you know Because a thing is written don't make it so

Q—You mean the book of provings in the homeopathic school is not accepted by you? *A*—Oh, no, I don't mean that. You must understand these provers were people who made their living to a very great extent, by proving, and some of them were very profoundly affected by the drugs they took Some of them were rendered sick and remained so the remaining portion of their lives Now these people sometimes did not recognize the fact that the effect of a drug like mercury or iodin or arsenic had not passed off, and they would be proving another drug and reading into the provings out of their own ignorance—possibly of the man who was employing them at that time—they would be reading into the provings these provings of the previous drug possibly, so that our old provings, although we regard them with a great deal of respect, and take them with a great deal of consideration, are not, in the light of our modern knowledge to be relied upon absolutely And that is the consensus of the homeopathic physicians who are up to date today

The witness stated that he had not heard of anyone using viburnum prunifolium in cases of threatened miscarriage The witness testified that according to his present knowledge, viburnum prunifolium was not used for a number of complications mentioned by Mr Hough He stated that carduus benedictus had been proven but this does not mean that it was not inert There are several hundred drugs in the homeopathic pharmacopeia and there are others besides viburnum prunifolium and carduus benedictus which are inert. Asked to mention some, he stated

A—Well, I will give you a few examples, but to go through the whole pharmacopeia, I am not competent to do But there is an instance Somebody made a proving of the effect of the steel taken from the north pole of the horseshoe magnet This fellow was a long haired enthusiast, in my opinion, those who know anything about him or his provings or the things he claimed for that drug do not pay any attention to it In regard to viburnum prunifolium, there has been no proving of it We disregard that And as to cnicus benedictus, I think that the majority of us know that it has no effect And in regard to—

Q—I am asking you about something that is in the pharmacopeia Aren't you naming something that is not in the pharmacopeia? *A*—Well, I don't know as to that I am thinking of the things that have been discarded by the majority of us

Q—Well, I am not asking about anything that has been discarded and is not in the pharmacopeia *A*—Now, there is sugar of milk that is in the pharmacopeia I think somebody made a proving of sugar of milk once You see we have enthusiasts in all walks of life and some of them have brought the homeopathic school into disrepute which we very much regret

Q—I don't see it here *A*—All right Possibly you had better let me have the book, and look through it for a few of those drugs I cannot recall them off hand

Q—Sugar of lead is the only one in fact— *A*—Sugar of lead would be an active drug

Q—You spoke of sugar of milk which I don't see there (Handing book to witness) *A*—Carbo vegetablis vegetable carbon We will call that out of the active drugs

Q—Well, is that sugar of milk? *A*—That is vegetable carbon, charcoal

Q—I say, is that sugar of milk? *A*—No, it is not I have answered that.

Q—You don't find sugar of milk there? *A*—I have not looked for it. You said it was not there, and I took your word for it. We will look for saccharum lactis, that is the homeopathic name for sugar of milk I don't find sugar of milk

Dr Tenney was then asked concerning extracting of drugs with alcohol He recognized that there is such a thing as synergism He is not a member of the American Medical Association unless some of his connections automatically make him a member He is a subscriber to The Journal and is a member of the Chicago Medical Society He was then cross-examined in detail concerning assumptions in the hypothetic question

He was then asked to state in brief his method of treatment of gonorrhea He gives an antiseptic douche and by mouth he gives laxatives, also iron or any tonic which may be necessary, and advises the patient to avoid exercises, alcohol and coffee. He put her on a simple nutritious diet He usually gives iron hypodermically

Q—Is there any alcohol in the tonics you give? *A*—In any of the tonics that I give in gonorrhea you mean?

Q—Yes *A*—Not that I know of I try to avoid all alcoholics in my remedies

Q—What do you mean by "not that you know of?" *A*—Well here is the idea Once in a while some detail man comes along from Parke Davis & Company and says Doctor, here it is at last He will leave a sample bottle and later when I am in a hurry some people will come in with a condition he has just described, and you will say How fortunate that is here is a patient here that we have just been told how this medicine will act on him' And we give him that and possible find out the next day that it contains alcohol May be it is a good remedy and may be it is not That sort of thing of course is not in accord with the kind of work which we aim to do all the time But those are the circumstances when these little things creep in under your guard as it were

Q—But you know how much alcohol is in it at the time you prescribe it don't you? *A*—Well we do now if we prescribe those things because the pure food and drug law has been in operation—

Q—And you have known it since 1906? *A*—Well, with that correction I should say I never prescribe alcoholics without knowing it since 1906

Dr Tenney was asked concerning his treatment of prolapse of the uterus He described the various degrees of prolapse and mentioned the treatment He mentioned certain cases of sterility which might be cured by medical measures for example obesity as a case may be cured by thyroid extract, anemia by administration of iron and arsenic, etc He would treat stenosis of the cervix by surgical or mechanical means He described stenosis of the cervix and its complications and the method of treatment In treating dysmenorrhea he would give something to relieve the pain He could not think of a single case of stenosis which would not be benefited by an operation He was asked as to the treatment of hematometra He would give ergot or pituitrin and perhaps pack to prevent bleeding

Q—You mean you would use a uterine medicine? *A*—A uterine medicine?

Q—Yes *A*—Well as homeopaths we don't know uterine medicine We use some remedies that act upon the womb like pituitrin for instance or ergot but they act upon all parts of the unstriped muscle tissue equally as such

Q—Those are allopathic remedies? *A*—No no they belong to any physician who wants to use them They are not allopathic There is no such thing as allopathic any more

Q—What do you call it now? *A*—Well we have the—we are physicians There are a few who still cling to certain of their homeopathic belief *and homeopathic practice and so we sometimes are men*tioned or spoken of as homeopathic physicians but we don't—we *don't divide the thing up into a lot of wrangling sects*

THE COURT—You mean that nobody is so bigoted today that he is unwilling to make use of somebody else's medicines if he believes it is best for the particular disorder that he has in charge?

The Witness—That ought to be published Your Honor that is very excellent

Mr Hough *Q*—Well when you say you don't know any such thing as uterine medicine you are speaking as—not as an allopath but as a homeopath? *A*—No sir I am speaking as a physician I don't recognize anything as being especially a uterine medicine There are certain medicines which act upon the uterus more apparently than they do upon other tissues because the uterus is the biggest mass outside of the heart of unstriped muscle tissue in the body And ergot contracts unstriped muscle everywhere It blanches the fingers the nose the ears the tongue the lips and it contracts the uterus Why does it blanch these parts? Because it contracts the unstriped muscle tissue in the arterial vessels And it contracts the unstriped muscle tissue of the womb It is a remedy which acts upon the whole circulatory apparatus The same is true of pituitrin the same is true of adrenalin chlorid The same is true in a lesser degree of hydrastis or hydrastinin

Q—Any others you can think of? *A*—Those are the drugs upon which I depend more especially I will mention another eserin sulphate has that effect

Q—Did you ever use apiol? *A*—Apiol?

Q—Yes *A*—*Yes I have used it It is a French preparation that* has failed me

Q—Failed you? *A*—*Yes it has not given the results it was sup*posed to give

Dr Tenney was asked concerning his treatment of amenorrhea, he stated that if due to anemia he would give iron arsenic, and quinin, if tuberculous, he would use outdoor treatment and diet, if stenosis, he would operate on the stenosis, if chlorosis, he would give iron, arsenic and an extract of bone marrow, if due to obesity, he would treat obesity He would treat amenorrhea as a symptom

Q—Don't you prescribe according to the symptoms? *A*—And we treat the underlying cause back of this symptom in order to correct the *symptom*

Q—Don't you prescribe according to symptoms? Isn't that homeopathy? *A*—Well yes—you know—I think the best illustration of the difference in the line of attack of the homeopathic physicians and the rest of the medical world may be well illustrated in this way You go to church and you hear the minister preach about Noah building the ark One minister begins with Noah and another begins with the Ark and tells all about it but they are both talking about the same subject In some things homeopathy starts after the symptoms *first* but we are always looking for the underlying cause trying to relieve that otherwise we would not be able to hold our heads up in this modern world The old school men very frequently start right after the diagnosis and explain the symptoms from their diagnosis But we are all working to the same end

Q—Well the practice of homeopathy teaches the prescribing for the symptom doesn't it? *A*—Well the original teachings yes You must remember that the progress of medicine in the last fifty years has been very great—

Q—Well are you practicing homeopathy now? *A*—I am practicing homeopathy plus *I am practicing medicine and I use my homeo*pathic remedies, my homeopathic philosophy and my homeopathic lines of procedure, where they do good *for my patients Where they don't* do good I discard them

Dr Tenney testified as to drugs mentioned in the homeopathic pharmacopeia for the treatment of amenorrhea and as to the quantities of alcohol in these preparations He stated that alcohol would have no effect on the condition

Q—Did I understand you to say that pregnancy is not a pathological condition? *A*—Certainly you did understand me to say that if I have been asked that question Pregnancy is a normal condition—if it is a *normal pregnancy*

Q—And therefore would not be considered pathological? *A*—Certainly not

Q—But purely physiological? *A*—Purely physiological

Q—Did you hear Dr De Lee's testimony? Were you in court? *A*—I heard a portion of it

Q—You disagree with him?

Mr T J Scofield—If the Court please—

THE COURT—He said the same thing

Mr T J Scofield—Dr DeLee said the same thing

THE COURT—He said an absolutely normal case was not pathological

Mr Hough—I did not ask him about an absolutely normal case

THE COURT—That is what this witness said He said the normal pregnancy is physiological

Mr Hough—I asked him if pregnancy is pathological—is it ever pathological?

The Witness—You asked me if a normal pregnancy was a diseased condition or something of that kind

Mr Hough—I did not use the word normal

The Witness—A normal pregnancy is normal

Mr Hough—Of course

The Witness—Yes

Mr Hough *Q*—If it is pathological—

The Witness—A pathological pregnancy is pathological

The witness then mentioned some of the complications of pregnancy He described the care of a patient in a pregnant condition If patients require tonics he usually gives them in powdered form without alcohol

Q—How long have you been *giving medicine without alcohol* since this case started? *A*—No no indeed I have not even—I don't think *about the amount of alcohol*—I just did that to save you the trouble of asking me how much alcohol there was in it.

Q—*You mean you never give any medicine* you think there is any alcohol in in any of those conditions? *A*—No no—I might give something containing alcohol *Some of them I prescribe alcohol* for but that is very rare

Whereupon the hearing of the above case was adjourned until Wednesday *April 26 1916*, at *10 30* o'clock a m

April 25, 1916, Morning

The Court met pursuant to adjournment On motion by Mr Walker, who informed the Court of the death of one of the plaintiffs, the Court was adjourned until Tuesday, May *2*

May 2, 1916, Morning

The Court met pursuant to adjournment Mr Walker informed the Court of the death of the plaintiff, Mr John A Patten and stated that it was desired to proceed in the partnership case

(To be continued)

The Work of the Young—The fact that young persons' fingers are nimble and their actions quick should not be taken advantage of by allowing disastrous exhaustion to lessen their vitality at this most important period of life Particularly does this apply to the permitting of piece-work, and monotonous or steady straining processes—*Hayhurst*

Correspondence

What Is a Vitamin?

To the Editor —The following statements I wish to make in justification of my position as the author of the term "vitamin" as well as in refutation of some of the statements printed in your editorial entitled "What is a Vitamin?" (THE JOURNAL, May 6, 1916, p 1470) I have no doubt that the sense of justice and fairness which have always impressed me in your publication will guide you to publish my letter in an early issue of THE JOURNAL

When early in 1911 I started the research which led to the isolation of the vitamin-fraction from various foodstuffs, my work was inspired by the remarkable results of Eijkman Grijns and Schaumann, who were able to prove that in rice-polishings and in yeast, substances are present which protect fowls, pigeons and men against beriberi My task was then to find out to which chemical group these protective substances belong and this has been successfully accomplished and described in two publications (*Lancet*, London, Nov 4, 1911, *Jour Physiol*, Dec 22, 1911) From reasons unknown to me, references to these two early publications are usually omitted in the literature, and the paper of Hopkins (*Jour Physiol*, 1912, xliv, 425) is quoted, which has been undoubtedly partially influenced by my work It was only in 1912 (*Jour State Med*, June, 1912) after a careful revision of my experimental data that I introduced the term "vitamin" for these protective substances which are indispensable for life and which, judging from their chemical reactions, belong undoubtedly to the group of organic nitrogenous bases Later on I went farther, and a few substances were isolated and analyzed which, I have reasons to believe, are chemically related to the original vitamin present in less purified fractions I am glad to say that even now, after five years, there is not a single paper in the existing literature able to refute my experimental data That the introduction of the term "vitamin" was justified we can judge from the quick succession of terms used to designate the same substances torulin of Moore, Oryzanin of Suzuki, antiberiberin of Tsuzuki, accessory substances of Hopkins, and finally substances A and B of McCollum If terms could only be applied to chemically pure, fully identified substances, 90 per cent of the already existing names in the physiologic chemistry would have been discontinued (examples names of ferments, hormones, proteins, nucleins, polysaccharids, lipoids, cerebrosids, etc)

As to the necessity of two different substances (one soluble in alcohol and the other in water) for growth of young animals, the work done in conjunction with A B Macallum was not able to substantiate it Vitamin is soluble in alcohol and more so in water, but we are dealing here with one and the same substance Our present results so far show that the beriberi-vitamin suffices for growth of young rats, for long maintenance (over sixty days) a small supply of antiscorbutic vitamin seems necessary, otherwise scurvy with even slight rachitic symptoms occurs in rats This condition can be avoided by using autolyzed (wet) yeast or orange juice, in difference to dried yeast, which apparently possesses no antiscorbutic properties for rats So far in our experiments butter was found to have no action on the growth of rats, but was found to have slight antiscorbutic effect (scurvy-vitamin carried down from milk) In order to avoid further complications and fallacies in the already complicated problem of growth in rats, we wish to test our preliminary results in all directions before final publication, but we find that some of the recent results on the growth of rats, on which your editorial is based, give not the slightest justification for the discontinuation of the term "vitamin"

In the same issue of THE JOURNAL, Dr E J Wood deals with pellagra as being due to a deficiency of vitamin Apparently by mistake my name was omitted as the originator of this hypothesis (*Jour State Med*, June, 1912, "Die Vitamine," Wiesbaden, 1914) Later on I pointed out (*Jour Physiol*, December, 1913, *Munchen med Wchnschr*, 1914, No 13) that the acute form of pellagra prevailing in the United States might be due to the use of extensively milled corn, to which conclusion Dr Wood also arrives

CASIMIR FUNK, M D, New York

Teaching Units and Mergers of Medical Colleges

To the Editor —I have read the Current Comment on this subject (THE JOURNAL, May 6, 1916, p 1471) with much interest It points the direction that medical education will have to take, but a word of warning should be sounded lest a fetish be made of the word "university," and weak medical schools be linked together without having real university methods and equipment Medical teaching cannot be improved until the unit system is established in the clinical as well as in the laboratory branches How many universities have put their clinical teaching on a university basis? How many provide their professors in the clinical branches either directly or indirectly with hospital wards, dispensaries and laboratories? How many are prepared to meet the university ideal that a professor in a clinical branch shall have an active service of at least sixty beds and shall not attempt to give bedside instruction to more than a proportion of one student to three beds? Here is where the application of the unit system is needed The old idea that there should be but one professor, *the* professor, must go A university must increase its units in the clinical branches because of the very nature of things A professor cannot *properly* look after more than sixty bed patients, and a patient can be observed and studied by only a few students at the same time and then only once in a day It is this feature that makes proper medical education so costly In dealing with inanimate objects, the same apparatus and equipment can be used over and over again even on the same day, but, of course, patients cannot be so used

By all means let us have university control of medical schools, but let us be sure that the university will assume the same degree of responsibility in teaching the clinical branches that it does in teaching the other sciences Let us make sure that universities are not used as a cover for concealing inadequacies in financial resources or control of clinical material

OTTO V HUFFMAN, M D, Brooklyn
Secretary of the Faculty, Long Island College Hospital

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed Every letter must contain the writer's name and address, but these will be omitted, on request.

OWNERSHIP OF ROENTGENOGRAMS

To the Editor —I am writing to inquire whether or not there has been at any time a court decision with regard to the ownership of roentgenograms As a rule, there are three claimants, each presenting arguments which to him seem conclusive, namely, the roentgenologist the physician and the patient The situation has been a nuisance to several of us in this community at various times

A B DIEPENBROCK, M D, Sacramento, Calif

ANSWER.—We can find no cases touching directly on this subject A few cases have been found in regard to the ownership of photographic plates, but even these are indefinite and uncertain in their meaning

As regards photographic plates the courts have recognized the fact that authorship and originality of intellectual creation have the right to protection This gives a photographer the right to have ideas, as exemplified by photography, protected by law But this position of the courts does not import that a photographer has any title in the plates per se His title is in the concept with some exceptions Whatever title a photographer may have in a photographic plate depends on the contractual relation between himself and the subject of the picture When a person sits for a photograph he does not usually vest the photographer with the right to use the plate as he may see fit The same, broadly speaking may also be said of a person who permits a roentgenogram to be made of his body The idea and method of posing belongs to the operator and the title of the plate in the absence of a special contract at least so far as the absolute disposition is concerned belongs to the patient The physician would not be prevented probably from using the plate for clinical purposes or lectures if the *name* of the patient was not disclosed as the plate, unlike a photograph can be recognized and understood only by experts The layman would not know to whom the plate had reference The courts have held *that persons may enjoin* the use of their photographic likeness by a photographer when such use may cause them injury

Similarly a court might enjoin the use of a roentgenogram by a roentgenologist who made it or the physician for whom it was made when the physician's agreement with the patient was that the plate was to be used for diagnostic purposes only But if it was generally understood that the patient permitted the roentgenogram to be made for such diagnostic and other purposes as the physician may see fit, then there is for all practical purposes a vesting of title or at least user in the physician This would not however give the roentgenologist title other than to the concept unless he has a special contract with the physician, as he is in no way privy to the contract between the physician and the patient The argument that the patient is not paying for the plate but only for the benefit he may derive from that method of diagnosis would go the length only of supporting a right to possession in the person making the plate supposing his contract with the physician for whom the case is being diagnosed would permit such a construction and would not give either the roentgenologist or the physician the right to use the plate in any way either might see fit It may be true that the patient cannot demand and obtain possession of the plate, but neither can the operator or the physician have an unlimited user In reality, therefore there is a joint ownership the operator depending on his contract with the physician having perhaps the general right to protection for the concept, the physician who diagnosed the case having a right of possession with a *limited* user as per contract *with the patient, and the patient* having a supervisory interest in the plate

See the following cases

Am Mutoscope Biograph Co v *Edison Mfg Co* 137 F 262
Itzkovitch v *Whitaker* 39 So 499 115 La 479, 1 L R A 1147
Schulman v *Idem* 39 So 707 115 La 628
In re *Whitaker Idem*
Burrow Giles Lith Co v *Sarony* Ill U S 53
Thornton v *Schrieber* 124 U S 612
Nottager Jackson 11 Q B Div 627

BLOOD VISCOSITY

To the Editor —Can you give me some references to English literature on blood viscosity especially methods of measuring viscosity? All the references that I have been able to find are from foreign journals to which I have no access

R M C M D Newark N J

Answer —The following is a list of references to articles on blood viscosity In the Therapeutics Department of The Journal this issue, p 1622 there appears a discussion of this subject

Burton Opitz Russell The Viscosity of the Blood The Journal July 29 1911 p 353

Sadikoff V S and Lozinsky, A A Determination of Viscosity of the Blood *Russky Vrach* 1914 xiii, No 19 abstr The Journal Oct 31 1914 p 1615

Bucco M Viscosity of the Blood and the Blood Pressure Riforma med, March 28 1914 abstr, The Journal May 9 1914 p 1517

Milk-Borne Typhoid Fever at Northbridge —An epidemic of typhoid fever in Northbridge illustrates the necessity for caution in making an epidemiological diagnosis Polluted river water was regularly introduced into the town mains for fire purposes A history of a fire within the period of incubation of typhoid fever, plus the wide distribution of cases, pointed to water as the carrier of the infection Yet careful analysis of the milk supply accounted for every case Sixteen out of the twenty-two patients received milk from a dairy in which a milker and pedler was discovered ill with ambulatory typhoid, confirmed by Widal and examination of urine and stools Even the six cases not receiving milk directly from the infected dairy had been subjected to the infection by the exchange of milk These cases developed too soon to have been secondary infections —*Public Health Bulletin* Mass State Dept of Health, March, 1916

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Delaware Dover and Wilmington, June 20 22 Sec, Dr H W Briggs 1026 Jackson St, Wilmington

Florida Jacksonville June 13 14 Sec, Dr E W Warren, Palatka

Georgia Atlanta and Augusta, June 1 Sec Dr C T Nolan, Marietta

Illinois Chicago, June 21 23 Sec, Dr C St Clair Drake Springfield

Iowa Iowa City June 8 10 Sec Dr Guilford H Sumner, State House Des Moines

Kansas Topeka, June 13 Sec, Dr H A Dykes Lebanon

Kentucky Louisville, June 13 15 Sec Dr A T McCormack Bowling Green

Louisiana New Orleans, June 8 10 Sec, Dr E L Leckert 716 Macheca Bldg New Orleans

Michigan Detroit June 1 3 Ann Arbor, June 19 21 Sec., Dr B D Harison 504 Washington Arcade Detroit

Minnesota Minneapolis, June 6 9 Sec, Dr Thomas S McDavitt 814 Lowry Bldg St Paul

Mississippi Jackson June 20 21 Sec Dr J D Gilleylen Jackson

Missouri St Louis June 13 15 Sec, Dr J A B Adcock Jefferson City

Nebraska Lincoln June 8 9 Sec Dr H B Cummins Seward

New Hampshire Concord, June 26 27 Sec Dr W T Crosby, The Beacon Manchester

New Jersey Trenton June 20 21 Sec, Dr Alexander MacAlister 429 E State St Trenton

North Carolina Raleigh June 27 30 Sec Dr H A Royster Raleigh

Ohio Columbus June 6 9 Sec Dr George H Matson State House Columbus

South Carolina Columbia June 13 Sec, Dr A Earle Boozer 1806 Hampton St Columbia

Texas San Antonio June 27 29 Sec, Dr John S McCelvey Temple State Bank Bldg Temple

Virginia Richmond, June 20 23 Sec, Dr J N Barney, Fredericksburg

Wisconsin Milwaukee June 27 29 Sec Dr J M Dodd 220 E 2d St Ashland

Wyoming Laramie, June 14 16 Sec Dr H E McCollum, Laramie

California December Report

Dr Charles B Pinkham, secretary of the Board of Medical Examiners of the State of California, reports the written examination held at Los Angeles Dec 13-17, 1915 The total number of subjects examined in was 9, total number of questions asked, 90, percentage required to pass 75 The total number of candidates examined was 54, of whom 37 passed including 20 osteopaths, 10 of whom were granted physician and surgeon's license, and 17 failed including 13 osteopaths of whom 9 failed to pass the physician and surgeon's examination Thirty-four candidates were licensed through reciprocity The following colleges were represented

College	PASSED	Year Grad	Per Cent
California Eclectic Medical College	(1913) 75	(1915)	85 4
College of Phys and Surgs Los Angeles	(1914) 81 3	(1915)	92 2
College of Phys and Surgs San Francisco		(1914)	81 3
Oakland College of Medicine and Surgery		(1914)	79 4
University of California	(1914) 92 2	(1915)	88 2
Rush Medical College	(1913) 89 7	(1915)	89 9
State University of Iowa Coll of Med		(1915)	87
Tufts College Medical School		(1903)	75 1
Saginaw Valley Medical College		(1902)	82 1
Medico Chirurgical Coll of Phila		(1914)	77 2
University of Pennsylvania		(1915)	86 4
Marquette University		(1915)	84 1
University of Toronto		(1902)	80 2
	FAILED		
College of Phys and Surgs, Los Angeles		(1914)	71 8
Coll of Phys and Surgs San Francisco		(1914)	66
Chicago College of Med and Surg		(1911)	38 1
Tokyo Charity Hosp Special Med School		(1911)	52 9

College	LICENSED THROUGH RECIPROCITY	Year Grad	Reciprocity with
College of Phys and Surgs, San Francisco		(1902)	Nevada
Cooper Medical College		(1903)	Nevada
Coll Phys and Surgs Chicago	(1899)	(1901)	Illinois
Hahnemann Med Coll and Hosp Chicago	(1882)	(1893)	Iowa
Northwestern University		(1898)	Illinois
Kentucky School of Medicine		(1881)	Illinois
University of Louisville	(1882) Indiana	(1893)	Kentucky
Johns Hopkins University		(1899)	Illinois
Univ of Mich Medical School	*(1888) Utah*	(1898)	Michigan
Minnesota College of Phys and Surgs		(1896)	Minnesota
American Medical College		(1898)	Illinois
Hahnemann Med Coll of Kansas City Univ		(1901)	Missouri
Kansas City Medical College	(1894) Nevada (1896)	(1897)	Missouri
Marion Sims College of Med	(1892) Missouri	(1895)	Illinois
Missouri Medical College		(1881)	Illinois
S Louis Coll of Phys and Surgs		(1895)	Nebraska

Medicolegal

Liability of a Railroad Company for Malpractice

(Boring v. Chicago & Erie Railroad Co. (Ind.), 110 N. E. R. 545)

The Supreme Court of Indiana reverses a judgment sustaining a demurrer interposed by the railroad company to a complaint seeking damages for the death of an employee alleged not to have been properly treated after he fell from a hand car and struck his head on one of the rails of the track, thereby suffering a rupture of a blood vessel in his head from the effects of which he died on the following day. The court says that it is well settled that a railroad company is not liable to an injured employee for the negligence of a physician called by it to render medical or surgical aid, if it was not negligent in selecting and employing an incompetent and unskilled physician. If, however, the company knowingly selects an unskilled and incompetent surgeon, a different rule applies, for his negligence then becomes the negligence of the company and it is responsible for resulting injury. The complaint in this case charged that the injury stated caused the employee to become unconscious and thereby rendered him unable to provide for and take care of himself in the emergency, whence it became the duty of the company to take care of and provide him with competent medical care and services; that with full knowledge of all the facts the company selected an incompetent and unskilled physician to treat him, and that by reason of the negligence of the physician he failed to recover from his injuries; that the physician permitted him to go to his shanty, in which he was living, alone and unattended, and permitted him to stay there over night and through the next day without any medical attention whatsoever; that the company well knew, or by the means of exercising reasonable care and diligence could have known, that the accident to the skull would cause a rupture of the blood vessel and cause death by pressure on the brain, etc. The facts alleged in the complaint must be treated as admitted as against the demurrer and, if sustained by proof, were sufficient to warrant a finding on the part of a jury that the circumstances surrounding the injury occasioned an emergency in which it became the duty of the company to take reasonable steps to prevent an aggravation of the man's injuries through exposure or neglect. It is held further that the complaint sufficiently charged negligence on the part of the company, and that the trial court erred in sustaining the demurrer to it.

Validity of Rat-Proofing Ordinance to Prevent Spreading of Bubonic Plague

(City of New Orleans v. Sanford et al. (La.), 69 So. R. 35)

The supreme court sets aside a judgment of conviction for violation of Ordinance 17 as amended by Ordinance 21 of the Board of Health of the city of New Orleans and Parish of Orleans, or the rat-proofing ordinance adopted as a precautionary measure against bubonic plague. The ordinance was held invalid on the ground that some of its provisions were illegal and oppressive. The ordinance was assailed on the ground of its unreasonableness. It professed to be a measure for protection against rats by destroying their harboring places while it was, in the nature of things, inoperative as against certain state and federal government buildings and structures, which were admittedly the main source of danger. This included, also, the garbage dumps, which were admittedly the common resort of rats. The city did not rat-proof these foci of infection, because there were no funds available for the work. The ordinance thus compelled the property owners to rat-proof their premises, whether or not they had the funds to do it with, while those public foci of infection, the most dangerous, were left in full operation, scattered as they were throughout the city. This was claimed to be an unreasonable exercise of the police power, especially when attended with so great expense, and in many cases at so great personal sacrifice. A police measure dictated by some evil to be remedied should be commensurate with the necessities of the occasion. Where the same feature which operates as a public menace is present in all premises alike, the police measure for correcting this feature should operate as against all premises alike or else against none. And the public is no exception to this rule. But if, as the evidence in this case showed, this rat-proofing, coupled with rat-catching, was the only practicable mode of fighting the spread of this disease, and if, as was the case, the board of health was powerless to make this mode compulsory either against the federal, the state or the city government, what was it to do? However oppressive, however discriminating, however unreasonable this ordinance apparently might be, there was nothing else for the board of health to do, under the circumstances, than to adopt it, and hence the adoption of it was justified. But it stood to reason that the peaceful homes and business places of the inhabitants of this large city, constructed in conformity with the rules and regulations theretofore prescribed by the public authorities, could not be, overnight, by a stroke of the pen, converted into unlawful structures, so that such inhabitants, on reading their morning paper containing the promulgation of the ordinance, would be liable to a fine and to imprisonment for every day they continued to live in or own said structures. Moreover, while the board of health, or the city council, might validly clothe the health officer with the authority to ascertain and determine whether any particular building fell into the one prescribed class or the other, as, for example, the class to be concreted, or that to be merely tar-cindered, it could not invest him with authority to withdraw any particular building from the one class and place it in the other. The board of health could not delegate to a subordinate the power to create exceptions to any rule it had established, or, which was the same thing, the power to stay the operation of any rule in cases falling within the terms of its ordinances.

Restriction of Evidence to Charge of Malpractice—Giving Eggs and Toast Too Soon

(Ennis v. Banks et ux. (Wash.) 152 Pac. R. 1037)

The Supreme Court of Washington reverses a judgment obtained by the plaintiff for alleged malpractice in the treatment of her husband during an attack of typhoid fever, which resulted in his death. The court says that Dr. Banks was charged with having negligently, carelessly and unskilfully directed, prescribed and commanded that the patient be given a diet of poached eggs and toasted bread, after which he became very sick and suffered great pain and his bowels were perforated and torn. Having charged said defendant with a specific act of negligence the plaintiff might not under that charge introduce evidence of other acts, and attempt to show negligence therein, and have the jury instructed to find for her if they found that the defendant failed in any respect to exercise the degree of ability, skill and judgment ordinarily possessed and exercised by members of the medical profession practicing in his own and similar localities. The evidence should have been restricted to that tending to prove that the giving of a toast and egg diet was in this particular case unskilful and negligent treatment, and the jury should have been instructed to find for the plaintiff only if they so determined. While this rule would permit the plaintiff to introduce evidence of the defendant's treatment of her husband prior to the giving of the toast and egg diet, it would permit such evidence only for the purpose of showing that the diet given was improper in his condition at that time. Testimony given by the nurse as to the length of a rubber tube used in giving enemas, and by the plaintiff as to the heart action of her husband, had no bearing on the issue to be determined and could only have been confusing to the jury and should therefore have been excluded. The defendant urged that the trial court should have granted his motion for a nonsuit at the close of the plaintiff's case. There was evidence, however, that the toast and egg diet was, under the circumstances, an improper treatment. A physician so testified. This was evidence that the specific act alleged was negligent, and this evidence should have been submitted to the jury under proper instructions.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, DETROIT, JUNE 12 16

Alpha Omega Alpha Society, Detroit, June 12
American Academy of Medicine Detroit, June 9 12
American Association of Anesthetists, Detroit, June 12
American Proctologic Society, Detroit, June 12
American Therapeutic Society, Detroit, June 9 10
Maine Medical Association, Portland, June 7 8
Massachusetts Medical Society, Boston, June 6 7
National Association for Study of Epilepsy, Detroit, June 16
Nebraska State Medical Association, Omaha, May 23 25
New Jersey Medical Society, Spring Lake, June 20 22
Rhode Island Medical Society, Providence, June 1
South Dakota State Medical Association, Aberdeen, May 23 25
Western Roentgen Society, St Louis, June 9 10

NEW YORK ACADEMY OF MEDICINE

Meeting held April 20, 1916

The President, DR WALTER B JAMES, in the Chair

Vitamins a New Factor in Nutrition

DR CASIMIR FUNK Besides the ordinary food constituents, such as proteins, fats, carbohydrates, lipoids and inorganic salts, to which the value of our food is due, a number of substances can be found in small quantities which are as indispensable to life as the former constituents These substances I have designated "vitamins," and the diseases which arise from their lack as deficiency diseases or 'avitaminoses" I am surprised that the introduction of this term has aroused animosity since it is quite customary to give a name to a substance the presence of which is merely assumed before its actual isolation, and such terms are usually accepted until further evidence disproves their presence The evidence of the existence of the vitamins is many times stronger than in most cases in which similar terms have been introduced There is some difficulty in fractionating and identifying substances obtained in such small quantities, the vitamins, however, are sometimes stable at higher temperatures in the presence of acids, and can be thrown down by phosphotungstic acid or analogous reagents which are so largely used for the isolation of nitrogenous substances, and afterward it can be fractionated by means of mercuric chlorid and silver nitrate and baryta This precipitation is specific for vitamins, other precipitating agents which carry down heavy precipitates do not carry down the vitamins

With reference to the action of the vitamins in the tissues, nothing definite is known, except that they bear a certain relation to carbohydrate metabolism If a pigeon is fed on polished rice, it is possible to tell approximately when the symptoms of beriberi will appear when a given quantity of rice is metabolized It is also found that the blood sugar content in avian beriberi is greatly increased This fact has a practical bearing on infant feeding, a certain amount of vitamin can take care of only a limited amount of carbohydrate, and when starch is increased in the diet, the amount of vitamin-containing foodstuffs must be increased in proportion A second fact has been established in connection with the metabolism in the deficiency diseases, which is that in the absence of vitamin we not only obtain a negative nitrogen balance, but the whole metabolism goes wrong, this is particularly noticed in the negative balance of inorganic constituents The addition of vitamin puts the whole metabolism again on a normal basis Vitamin, when properly prepared and added to a diet of polished rice, makes that diet complete I have shown that no animal has yet been found able to live more than a short time on a vitamin-free food

When I first expressed the opinion that pellagra was a deficiency disease, I encountered great opposition, but now the etiology of this disease as a deficiency disease seems to be established It seems possible that pellagra is nothing but a chronic scurvy, whereas what we formerly knew as scurvy is only an acute form of the same disease The vitamin theory as to the etiology of rickets is at present merely a working hypothesis, but the results of animal experiments suggest that we are dealing with a deficiency disease due to a deficiency of vitamins which are not essential to life, or a partial deficiency of the ordinary vitamin The opinion of certain workers that rickets is due to a lack of calcium is very largely due to a misinterpretation of their experiments McCollum, and Osborne and Mendel have tried to demonstrate that butter has a decided effect on the growth of rats, and have stated that butter fat does not contain nitrogen I have succeeded in demonstrating that rats can grow very well without butter when a sufficient amount of vitamin is added to the diet of the rats, and hence I am unable to confirm the results of McCollum When working with yeast it has been noticed that rats fed on dried yeast grew well, but showed slight symptoms of scurvy, which disappeared when autolyzed yeast was used This possibly shows that rats require for their well-being both the beriberi and the scurvy vitamins Successful growth was also obtained by using phosphotungstic precipitate decomposed from autolyzed yeast, while the filtrate had no action whatever The fraction used was entirely free from material which could be extracted with lipoidal solvents, and this alone proved that the water-soluble portion of yeast is the only one responsible for the growth of the rats, in direct contradistinction to the statements of McCollum Experiments conducted in association with Dr Morris Stark show that McCollum's statement that casein loses, when heated with alcohol, its nutritive value is baseless We have shown, however, that by means of a suitable diet we can make rats grow twice as fast as on a diet regarded heretofore as normal, at the same time we have been able to stunt animals on a diet which might be designated as normal This result has been obtained in chickens fed on unpolished rice and still better by feeding unpolished rice and cod liver oil The same may be accomplished in rats on a diet of oats While cancer has nothing in common with the deficiency diseases we have shown that tumors in rats and chickens do not grow so extensively on a stunting diet as on a rich diet This makes it seem extremely probable that cancer is not of infectious origin but is due to a chemical cause

Group Similarities of the Deficiency Diseases
A Study of Infantile Scurvy

DR ALFRED F HESS There has been a difference of opinion as to whether or not the use of pasteurized milk can induce scurvy in infants The commission on milk standards, in its report of 1912, states that pasteurization of milk does not destroy its chemical constituents Determined to test the validity of this statement, we took a certain number of inmates of an infants' home, where all babies were fed on Grade A pasteurized milk which had been heated to 145 F for thirty minutes, and discontinued the use of orange juice No other change in the diet of the infants was instituted Almost all the infants who did not receive the orange juice developed a more or less marked form of scurvy, whereas those who continued to receive the orange juice were entirely free from this disorder The results of this investigation were questioned by some who were loath to believe that pasteurized milk could in any way lead to scurvy, and hence we extended the observation during the subsequent year The results were the same, so that I feel safe in saying that a diet of pasteurized milk leads to the production of scurvy in infants unless some antiscorbutic food is also given This scurvy is not, as a rule, of the florid type found in infants fed for months on a proprietary food, but may be described as latent or rudimentary scurvy It seems probable that this insidious type of the disorder is far more common than is generally recognized by physicians Raw milk is by no means comparable to orange juice as an antiscorbutic It is not to be inferred from these conclusions that the use of pasteurized milk is fraught with danger, but merely that it is an incomplete diet for babies and must be supplemented by an antiscorbutic food Secondary food factors seem also to play a part, malt preparations seemingly predispose to scurvy, and it seems probable that there is an intimate relation between the development of scurvy and the amount of carbohydrate in the dietary In considering the clinical relationship between beriberi and infantile scurvy the current clinical view which regards infantile scurvy almost as one of the hemorrhagic diseases and the current pathologic view which centers its attention on the changes in bone structure are far too limited in their scope Signs of the involvement of the nervous system are the characteristic manifestation of beriberi and infantile scurvy is not entirely free from nervous signs The knee jerks are frequently found exaggerated, and in some instances there is involvement of the optic disks and sensitiveness of the cutaneous nerves These symptoms disappear when the nutrition again becomes normal Dilatation of the right heart has been described in beriberi and a like condition has been demonstrated in infantile scurvy Edema is also a common symptom of the two conditions There is evidence demonstrating essential differences in the vitamins controlling the development of these allied disorders Observations have also been carried out as to the effect of infantile scurvy on growth It was found that although infants continued to gain for a few weeks following the discontinuance of orange juice they soon reached a stationary plane and for months were unable to rise above this level but increased in weight promptly when the antiscorbutic food was again added to their diet It is very probable that infants cease to gain during the third quarter of their first year of life for the want of this essential addition to their food, and fail to progress until mixed feeding is begun some months later The infant is protected during the first few months of life by the store of antiscorbutic material which it has inherited from its mother, and there is a constant negative balance of these essential substances dating from the earliest beginning of artificial feeding There is no reason why an infant should not receive orange juice when it is a month old Observations were also made on the growth in length as a result of which it was found that scurvy has a direct effect on such growth There was an exception to this, however, which shows that lack of growth does not play an essential part in the constitution of this disorder

DISCUSSION

Dr John R Murlin I have had the opportunity of observing pellagra in the U S hospital for the study of pellagra at Spartanburg S C So far it has not been proved that pellagra is a result of vitamin deficiency, neither has it been proved that vitamins are essential to life Dr Funk has shown the specific effect which can be obtained from extract of yeast and that added to the diet of polished rice it will cure polyneuritis in fowls, but it is a far cry from polyneuritis in fowls to pellagra In pellagra there is a perfectly symmetrical distribution of the lesions on the skin which must be attributed to the effects on the central nervous system, but the gastro-intestinal symptoms are equally as prominent Goldberger has shown that when normal persons are placed on a restricted diet such as is habitual among the poor of the South, they develop symptoms of pellagra and when an abundance of animal proteins are added to their diet, the pellagra can be cured To prove that the absence of vitamins produces the disease, it will have to be shown that food lacks vitamins and that the proteins which prevent the disease contain vitamins In pellagra the diet and the climate conduce to a peculiar gastro-intestinal condition The flora of the intestines is peculiar and may give rise to acid bodies which may be toxic, but there is no justification for the belief that the lack of vitamins is the sole cause of pellagra

Dr P A. Levene From the academic standpoint, the process of nutrition consists of two phases One is concerned with the production of energy required for the normal course of the functions of the organism, the other with the growth and repair of the tissue elements The first is a process of degradation, the second of synthesis There are many substances which can be converted into tissue elements by plants or bacteria, but which cannot be made use of for the same end by man A most perfect food is one which furnishes all the energy requirement with the least tax on the integrity of the tissues, and which at the same time contains in ready form all the elements required by the organism for the normal repair of its tissue elements In the light of these requirements a diet composed of homologous tissues approaches nearest the ideal On the other hand, a diet composed of an unusually large quantity of a single foodstuff is most taxing to the activities of the tissues It not only lacks some of the elements necessary to tissue repair, but also lowers the efficiency of the supply of these substances deposited in the tissues Such is the case in experimental polyneuritis Fasting is much less harmful than a diet consisting of polished rice alone A large intake of rice is more effective than a small one in producing beriberi Beriberi once produced may be cured by a well balanced diet, it may also be cured temporarily or partially by a minute quantity of certain tissue extract It is one of Dr Funk s merits to have introduced the name 'vitamin" for these substances The clinician for the present has to deal cautiously with the problem of vitamins Wherever possible he will have to avoid the one-sided monotonous diet

Dr L Emmett Holt Scurvy has been much more frequently seen since the general introduction in this city of pasteurized milk To my mind the evidence is conclusive that the connection is one of cause and effect Boards of health have been properly impressed with the part that milk has played in the transmission of septic sore throat and typhoid fever, but it is unfortunate that they should have neglected to warn the public that pasteurized milk may produce scurvy It has been asserted that if scurvy occurs in an infant it is always the fault of the milk formula and cannot be ascribed to the heating This is a difficult position to maintain While it is certainly true that the occurrence of scurvy shows that the food is not proper, this is far from proving that other proportions of the fat, protein and carbohydrate used would have given a different result The addition of cereals to milk as commonly employed in infant feeding does not seem to give any protection against scurvy if the milk is heated, but rather that additions of considerable amounts of carbohydrates, particularly in the form of starchy foods and maltose mixtures increase the liability to scurvy in heated milk I have now under observation an infant who has developed scurvy on a diet of heated milk and high carbohydrate in spite of the fact that 1 ounce of orange juice had been given daily for a month before the first symptoms were seen There is certainly an individual predisposition to scurvy which is of some importance Only a small proportion of the children fed on pasteurized milk develop the condition but the point to be emphasized is that it occurs in some infants even though fruit juice is given in the usual amounts and that this is more likely to occur if the carbohydrates in the food are high I do not wish to be understood as voicing an indictment of pasteurized milk, but simply to call attention to the disadvantages which must be considered as well

Dr Warren Coleman One of the most interesting phases of the vitamin problem for clinicians is the question whether the diets used in the treatment of any of the commoner diseases are deficient in these important substances There is no common disease of adults in this latitude which is recognized to be due to the lack of vitamins Yet, it is not impossible that ill defined types of disorders now thought to be due to disturbance of function, or some of the symptoms of well established diseases may have this origin I am more ready to credit this possibility because of my experience with typhoid fever I believe the very course of the disease has been altered by giving patients all the food they require instead of only a part of it I no longer consider diarrhea a symptom of typhoid fever, except, perhaps, in the prodromal stage, but think it is the result of improper diet, and it ceases when the diet is arranged properly Delirium and the typhoid state are not essential symptoms of the disease When delirium occurs it is due to the fact that either the temperature is elevated above a certain height for a particular individual, or to the elevated temperature plus starvation If in so well known a disease as typhoid fever such prominent symptoms could have been considered essential symptoms of the disease it is quite possible that some of the symptoms of other diseases, or at least some disorders not now understood may be found to be due to diets deficient in vitamins It may be well however, to direct attention to the fact that the so-called bland diets of the textbooks ordinarily consist of foods with a high vitamin content, unless they have been heated too long

Dr Morris Stark There is enough evidence in the literature to tempt one to assume that rickets is a metabolic deficiency If experiments now being conducted can definitely show, and I have no doubt they will, a change in the mineral metabolism as a result of the administration of vitamin substances in themselves free from these salts in any appreciable amounts, in addition to the diet which produced the deficiency disease, the point is proved and the mystery surrounding rickets solved Experiments have shown that boiling casein does not destroy its food value, but it does destroy the vitamins From many authoritative sources we are led to believe that yeast contains a large proportion of vitamin The effect of the administration of autolyzed yeast to rachitic children is a distinct increase of appetite

Dr Abraham Jacobi Scurvy is frequent nowadays when so many babies are artificially fed Pasteurized milk with a cereal will sometimes prevent or cure scurvy, but not every overrefined cereal will do this, only cereal in the raw state If there is no husk left on it there is no advantage to the baby Raw oatmeal or barley are the most efficacious materials to add to the milk Breast-fed infants rarely have scurvy, probably because the milk from day to day and from morning to night is never the same, it has the advantage of being changed frequently

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

American Journal of Insanity, Baltimore

April LXXII No 4 pp 591 715

1 Pathologic Findings in Sympathetic Nervous System in Psychoses A Myerson, Boston
2 *Wassermann Test in Practical Psychiatry L G Lowrey, Hathorne Mass*
3 *Sensibility of Nipple Area with Reference to Mental Disease M E Scheetz, Washington, D C
4 *Treatment of Paresis B D Evans and F H Thorne, Morris Plains, N J
5 *Intracranial Injection of Salvarsanized Serum D M Wardner, Cedar Grove, N J
6 Study of Aphasia Apropos of Case of Verbal Amnesia and Alexia A Gordon, Philadelphia
7 Unique Murder Case with Application of New Law Governing Expert Testimony J W Putnam, Buffalo

2 **Wassermann Test in Practical Psychiatry**—Statistics are presented by Lowrey dealing with the results of the Wassermann test on the blood serum of 1,600 cases admitted to Danvers State Hospital Of 864 male cases tested, 164, or 19 per cent, were positive Of 736 female cases, 92, or 12 5 per cent gave positive tests Of the 1,600 cases tested, 256, or 16 per cent, were positive Doubtful tests occurred in 3 87 per cent of the cases Including cases with positive spinal fluid test and negative or doubtful blood test, 273, or 17 per cent of 1,600 admissions, give a positive test at some point Of 164 positive blood tests among males, 113, or 68 8 per cent, occurred in cases of nervous syphilis Of 92 females with positive blood test, 32, or 34 8 per cent, were paretics Of 256 cases with positive blood test, 145, or 56 7 per cent, are cases of nervous syphilis Excluding paretics from all figures, positive tests occurred in 7 6 per cent of 1,455 admissions Of the nonparetic cases with positive blood, 20 are "organic," 80 are "functional" and 10 are "unclassed" It appears that, if an insane man has a positive blood test, the chances are better than even that he will be a paretic, while if a positive test appears in an insane female, the chances are that she will not be a paretic When paresis is excluded, the chances are about three in four that the person with positive blood will have a "functional" psychosis Among the paretics of this series, the blood test was positive in 87 5 per cent and negative in 10 3 per cent The spinal fluid test was positive in 87 2 per cent and negative in 8 5 per cent, while the test was positive in both fluids in 75 per cent of the cases Of 276 cases with test on the spinal fluid, there are 126 positive results Of these, 109 had blood and fluid test both positive, five had doubtful blood and positive fluid test, 12 had negative blood and positive fluid test Of the 126 cases with positive fluid test, 121 were paretics, two imbeciles, one was organic dementia, one a heroin case, one psychoneurotic The latter five may in the course of time develop paresis

3 **Sensibility of Nipple Area**—The ten cases examined by Scheetz show the following A decrease or lack of sensitivity to light touch throughout the whole areola nipple region. The retention but inaccurate localization of pressure sensation under normal conditions The exaggeration of pain sensations, both in the erected and in the unerected states, but more intense in the former The increase in sensitivity for pressure and pain stimuli when an erection of the nipples was induced The "reference of the sensations to the true sexual organs, at times by the stimulation of the unerected nipple, but in nearly every case when the erected nipple is stimulated That diseases of the sexual organs tend to influence mental life has long been recognized, but little is known scientifically regarding the normal sexual feelings and sensations This report aims to give for one of the accessory sexual organs a beginning of this information, without which there will persist a sharp clinical distinction between mental and physical, which does not in reality exist

4 **Treatment of Paresis**—In the New Jersey State Hospital at Morris Plains, Evans and Thorne have treated fifteen patients suffering from paresis with salvarsan and neosalvarsan Fourteen of these patients were treated by the intraspinous method of Swift and Ellis and one by the intraspinous and intracranial methods combined With the latter method two intracranial treatments were given at four weeks interval along with three intraspinous treatments The largest number of intraspinous treatments given to one individual was ten and the smallest number three Three of these patients showed mental and physical improvement, five showed physical improvement only, two died during the course of treatment, two died ten and thirteen months, respectively, after treatments were discontinued, the remainder showed no improvement whatever Of the three who showed mental and physical improvement one was discharged and still remains in good physical and mental condition, having returned to work One showed the first signs of improvement three months after receiving last treatment The third died with convulsions ten months after treatment The number of treatments given to each patient was insufficient to reduce the intensity of the Wassermann reaction either with the blood or the cerebrospinal fluid The improvements observed following the treatments may be seen among the same number of paretics who have received no special treatment The authors believe that the amount of salvarsan which can be introduced safely into the central nervous system is too small, and the intervals are too long between the treatments, to be of great value in moderately advanced cases The intracranial method seems unnecessary The same results can be obtained with the intraspinous method

5 ***Intracranial* Injection of Salvarsanized Serum**—Of fourteen patients treated by Wardner five improved sufficiently to be able to go back to their work and to date have remained well for from seven to eleven months At the end of eleven months, one of these patients had a bad relapse He was immediately brought back to the hospital and he responded immediately to additional applications of the serum At present he is well, mentally and physically, and has parole of the grounds Three other well developed patients have improved sufficiently to be put on parole of the grounds and are doing efficient work about the hospital Three others have shown fairly marked physical and mental improvement but cannot as yet be trusted at large Two have died In both of these patients, necropsies were performed and both showed, grossly and microscopically, changes suggestive of general paresis The immediate cause of death was in one case bronchopneumonia and in the other, who had right-sided convulsions at intervals, there was found a large cyst underlying the left motor cortex This last case had previously shown a well marked improvement and at the time of death was on parole Two cases have shown no improvement Both mental and physical improvement has generally been observed after the second or third operation, and has followed

so closely on the treatment as to practically preclude the idea of coincidence The maximum amount of improvement has occurred as a rule after six or seven treatments

American Journal of Orthopedic Surgery, Boston

May XIV No 5 pp 259 318

8 Advantage of State Hospital for Indigent Crippled and Deformed Children in Advancement of Orthopedic Surgery in State A J Gillette St Paul
9 Loose Bodies in Knee Joint Report of Cases M S Henderson Rochester Minn
10 Effects of Motion and Rest in Surgical Diseases J P David Paris
11 *Results of Fracture of Os Calcis Report of Cases F J Cotton and F F Henderson Boston
12 Fracture of Tuberosities of Tibia Report of Three Cases J W Sever Boston

9 **Loose Bodies in Knee Joint**—Cases are reported by Henderson to illustrate the various types of loose bodies to be found in joints He says that loose bodies may have as their primary cause some condition such as osteo arthritis or Charcot s disease, but the secondary cause is direct or indirect trauma Osteochondritis dissecans is a group standing more or less distinctly out from the rest The bodies seem to be produced by very slight indirect trauma It is however, difficult to estimate the degree of indirect trauma and for that reason they had better be considered as due to trauma rather than to an actual disease Trauma direct or indirect is essential to the production of a loose body Henderson is convinced that surgery offers the only permanent relief and the general condition of the patient being satisfactory, the bodies should be removed

11 **Fracture of Os Calcis**—Os calcis fracture of the usual compression type, Cotton and Henderson regard as being one of the most serious lesions met with, so far as future function is concerned It is of as serious prognosis (not as to life, but as to use) as fracture of the femur at the hip Ordinarily speaking the man who breaks his heel bone is 'done ' so far as his industrial future is concerned Late operations for correction are useful but far from ideal in results palliatives (plates, pads braces and shoe modifications) are usually useless Out of one series of sixteen cases cited only eight got even a useful result and in one of these the displacement was so slight that one of the authors felt that no reduction was called for Of the other seven, four recovered in spite of conservative' treatment but of these four, three still had trouble The other three were cases that had been properly reduced and in all three the result seems excellent In four which had been manipulated only, the result was poor, and of these eight practically untreated only four got any kind of result In a second series of twelve cases none had been treated and there were no decent results at all Out of the twelve, nine are definitely permanent cripples Two are due to improve and may possibly work again—one probably will get back to work.

American Journal of Tropical Diseases and Preventive Medicine, New Orleans

April III No 10 pp 529 578

13 Case of Mycetoma in Hawaii Its Etiology M T Clegg and W C Hobdy Honolulu
14 Intravenous Mercuric Chlorid in One Hundred Cases of Malaria (To be continued) N Barlow St Louis

Arizona Medical Journal, Phoenix

April IV No 4 pp 1 17

15 Duodenal Feeding in Treatment of Gastric and Duodenal Ulcers and Some Other Conditions J R Arneill Denver
16 Cerebral Anemia C S Vivian, Humboldt

Boston Medical and Surgical Journal

May 4 CLXXIV No 18 pp 633-666

17 *Use of Duodenal Tube for Diagnosis and Treatment. (To be continued) F W White Boston
18 Hallux Valgus C F Painter Boston
19 Choice of Climate in Cases of Bright s Disease and Nephritis G Hinsdale Hot Springs Va
20 *Pituitary Body and Renal Function K Motzfeldt Christiania Norway
21 *Simple After Treatment for Perineal Wounds E B Young
22 Exostosis of Upper Angle of Scapula L T Brown Boston Boston

17 **Use of Duodenal Tube for Diagnosis and Treatment**—White regards the duodenal tube as being a real contribution to medicine, although the field for its use, both in diagnosis and treatment, is somewhat limited He used the tube in 90 cases, fifty-six for diagnosis, in thirty-four for treatment The tube reached the duodenum in about 30 per cent of the cases within fifteen minutes, in about 30 per cent more within a half hour and in about 20 per cent more of the cases within one to six hours In about 20 per cent of the patients the tube had to be left in over night in order to reach the duodenum Some difficulties were met in adapting the routine to different sizes of patients and different sizes and shapes of stomachs The quickest way to enter the duodenum White found is to get the tube close to the pylorus within a short time This is best accomplished by using a light tube with a heavy tip swallowed by the fasting patient in the erect position feeding the tube in slowly and steadily

20 **Pituitary Body and Renal Function**—In one case of diabetes insipidus studied by Motzfeldt feeding the patient with the posterior lobe of the pituitary body checked the diuresis while administration of the anterior lobe had no such effect In a second case four posterior lobes of the pituitary body taken in the evening proved to be sufficient to diminish the output of urine to such an extent that she could sleep comfortably every night In a third case the diuresis went down from 6 000 to 1,500 c c, and the specific gravity increased from 1,003 to 1,007 on subcutaneous administration of pituitary extract (1 c.c by 3)

21 **After-Treatment for Perineal Wounds**—It is Young's aim to maintain the greatest possible degree of cleanliness and dryness as under such conditions infection and irritation are least likely to occur After twenty-four hours, when the bleeding has ceased the gauze perineal pad is omitted and the genitals and fissure between the buttocks kept liberally covered with a drying and antiseptic powder, the best being the compound stearate of zinc with boric acid The powder is best applied with the patient lying on the side, the upper buttock being raised and the powder thrown into every fold It is not sufficient to dust lightly or use a powder blower The parts must be covered thickly, especially between the buttocks and kept so throughout the healing if the best results are to be obtained Although the powder gradually becomes moist it gives excellent protection to the skin, is mildly antiseptic, and sheds water to an amazing degree With reasonable care it is usually possible to maintain absolute dryness If there is considerable tendency to moisture and maceration of the skin the application of a 10 per cent aqueous solution of ichthyol before dusting with the powder will be found effective The patient, free from any dressing lies on a small pad which collects any discharge from the vagina or elsewhere, and can be changed whenever necessary The genitals are carefully washed after urination and defecation and as often as may otherwise seem necessary

Delaware State Medical Journal, Wilmington

January VII No 2 pp 1 10

23 Organization of National and Local Forces in Campaign Against Cancer C E Lakeman New York.

Illinois Medical Journal, Chicago

April XXIX No 4 pp 241 320

24 Every Day Factors Affecting Health and Longevity C. J Whalen Chicago
25 Treatment of Extra Uterine Pregnancy A P Heineck Chicago
26 Diagnosis and Treatment of Ectopic Gestation E E Montgomery Philadelphia
27 Technic of Enucleation Thyroidectomy P Gronnerud Chicago
28 Thyroid Enlargements S C Bradley Marshall
29 Hydrotherapy W G Russell Fortress Monroe Va
30 Heredity and Evolution C L Redfield Chicago
31 Why We Need System in Physical Examinations T P Foley Chicago
32 Hypertension J G Carr Chicago
33 Hemolytic Icterus and Other Anemias With Special Reference to Fragility of Red Corpuscles D J Davis Chicago
34 Follicular Tonsillitis in Its Relation to Systemic Infections L E Barnes Chicago
35 Preliminary Report on Graduated Exercise as Inaugurated at Cook County Tuberculosis Hospital H H Bay, Oak Forest

120 Case of Pulsating Exophthalmos F Krause, Philadelphia
121 Technic of Secondary Nephrectomy E Gauraz, Mennecy, France
122 Compensation and Insurance in Eye Injuries C B Meding, New York
123 Cases of Reflex Irritation of Urinary Bladder J N Upshur, Richmond, Va
124 Diathermia in Tuberculosis A C Geyser, New York
125 Source of Pains in Head A D Mittendorf, New York
126 Id J L Courrier, Newark, N J

Ophthalmology, Seattle

April, XII, No 3, pp 457 592

127 Mirror Writing S H Brown, Philadelphia
128 Relation Between Surgical Operations on Eyeball and Pyorrhea Alveolaris L W Fox, Haverford, Pa
129 New Method of Dressing Eyes After Cataract Extraction F P Maynard, Calcutta
130 Gas Oxygen Analgesia in Eye, Ear, Nose and Throat Surgery W Walter, Chicago
131 Multiple Wounds of Eye Due to Broken Spectacle Lens A Murray, Chicago
132 Eye Injuries and Treatment in Present War S Walker, Jr, Chicago
133 Retained Foreign Bodies in Orbit F W Miller, Los Angeles
134 Massage in Glaucoma A A Bradburne, Manchester
135 State Legislation Concerning Trachoma I Allport, Chicago
136 Pulsating Exophthalmos Treated by Slow Occlusion of Common Carotid Artery With Neff Clamp S D Brazeau, Spokane, Wash

Pennsylvania Medical Journal, Athens

April, XIX No 7, pp 485 580

137 Morbidity of Acute Appendicitis G P Muller, Philadelphia
138 Involvement of Pectoral Muscle in Cancer of Breast, Report of Examination of One Hundred Specimens J Speese, Philadelphia
139 *Free Transplantation of Fascia Lata in Treatment of Inguinal Hernia F T Stewart, Philadelphia
140 Pancreas and High Intestinal Obstruction J E Sweet, Philadelphia
141 Case of Palsy of External Rectus Muscle With Operation C M Harris, Johnstown
142 *Treatment of Tuberculous Peritonitis, Medical vs Surgical T J Elterich, Pittsburgh
143 *Tertiary Manifestations of Syphilis as Seen in General Medical Ward J H Musser, Jr, Philadelphia
144 *Chronic Arthritis T McCrae, Philadelphia
145 Case of Scurvy With Amebae Found in Gums T M Tyson and H D Jump Philadelphia
146 *Report of New Method of Treating Gonococcic Purulent Conjunctivitis by Exclusive Use of Iced Normal Salt Solution E B Heckel, Pittsburgh

139 Abstracted in THE JOURNAL, Oct 23 1915, p 1483

142 Abstracted in THE JOURNAL, Oct 30, 1915, p 1578

143 Abstracted in THE JOURNAL, Oct 9, 1915, p 1304

144 **Chronic Arthritis**—On the basis that chronic arthritis may be of infectious origin, McCrae, says, one should give up the habit of calling such conditions "rheumatism" This only means a hazy conception in the minds of most of us and we need clear ideas and definite conceptions in dealing with chronic arthritis, which has nothing to do with rheumatic fever, a definite infectious disease readily recognized in the majority of cases If there is doubt in the diagnosis of an acute arthritis, as there may be for some days, it is wiser to feel that other forms of arthritis have to be excluded and it is better to make the diagnosis of rheumatic fever last rather than first The occurrence of permanent changes in or about a joint, even though very slight, speaks against rheumatic fever The finding of the original focus of infection is more essential It is not well to think that this is an easy matter, sometimes it is, but more often the search is difficult In general, the measures to be adopted are (1) early recognition before material damage is done so that the proper measures can be adopted at the onset, (2) thorough search for the focus of infection and efficient treatment of this if found, (3) every effort to improve the patient's powers of resistance, and this is particularly important if the source of infection cannot be found, in the hope that the patient may overcome the infection by his own powers of resistance This involves the best possible nutrition, good hygiene, free elimination and the blood in good condition, (4) the effort to lessen the damage to the joints, under which head come the proper uses of exercise and rest, local measures, such as aid the circulation or relieve pain, (5) the relief of pain both for the sake of the patient and to allow of movements in some cases, (6) the prevention of deformities

146 **Gonococcic Purulent Conjunctivitis Treated by Iced Normal Salt Solution**—The temperature which can be maintained with cold is almost 0 C, under which the gonococci are killed instantly On this assumption and the assumption that gonococci are found only in superficial epithelial tissues and do not penetrate deeply, Heckel says, that we have in iced normal salt solution a harmless effective germicide, easily produced, maintained and easily applied He cites two cases in which its use was followed by excellent results

South Carolina Medical Association Journal, Greenville

April XII No 4, pp 95 126

147 Medical Preparedness in South Carolina G A Neuffer, Abbeville
148 Ignorance, Superstition, Quackery R B Furman, Sumter
149 Preparation of Patient for Surgical Operation F L Pot s Spartanburg
150 Care and Treatment of Patients at State Hospital for Insane, Columbia, S C C F Williams, Columbia

Southwest Journal of Medicine and Surgery, El Reno, Okla

April XXIV, No 4, pp 101 128

151 Food Poisoning and Its Relation to Cold Storage, Its Medicolegal Importance T W Schaeffer, Kansas City, Mo
152 Early Recognition of Some Serious Affections of Eye G A Landes, Parsons, Kan
153 What Patien s Swallow S H Landrum, Altus
154 Tracheobronchoscopy and Esophagoscopy, Report of Cases D L Shumate, Kansas City, Mo

FOREIGN

Titles marked with an asterisk (*) are abstracted below Single case reports and trials of new drugs are usually omitted

British Medical Journal, London

April 15 II No 2885 pp 541 576

1 Colds and Influence of Atmosphere on Nasal Mucous Membrane L Hill
2 Soldier's Heart and Its Relation to Thyroidism J Barr
3 Penetrating Wounds of Abdomen, Report of Cases H H Sampson
4 Two Cases of Removal of Bullet from Upper Surface of Diaphragm E D Telford
5 Value of Time in Surgery R P Rowlands
6 *Nature and Treatment of Concussion T E Harwood
7 Three Cases of Paroxysmal Hemoglobinuria in Soldiers D MacManus
8 Case of Heart Block in Jaundice R D Rudolf

6 **Nature and Treatment of Concussion**—Harwood believes that there is some relationship between errors of refraction and concussion in its expression of a neurasthenia A patient suffering from head injury or shell shock is usually put to bed and rested in every possible way, almost the only organs of his body on which any constant voluntary effort falls are his eyes In fact, throughout his convalescence his chief energies are, consciously or unconsciously, being spent on his eyes, because without the use of his eyes he can do little or nothing, and during all his waking moments a large proportion of his diminished available energy is being spent on them, the result being that the rest of his body is starved Various functional effects follow, and the patient falls a ready victim to organisms normal to the body and their toxins But by correcting the refractive error the work which the eyes have to do can be reduced to a minimum

Dublin Journal of Medical Science

April, CXLI, No 532 pp 227 294

9 Fat Supply of Germany A D Waller
10 Therapeutics of Distilled Water G A Stephens

Edinburgh Medical Journal

April, XVI, No 4, pp 257 336

11 *Nonprotein Nitrogen of Blood, Especially in Its Relation to Nephritis and Renal Function F D Boyd
12 Case of Enteric Intussusception J Fraser
13 Cases of Perforating Pyloric and Duodenal Ulcers W A Mackay and I Macdonald
14 Flash Boiler as Field Equipment W Robertson
15 Royal College of Surgeons of Edinburgh C H Creswell

11 **Nonprotein Nitrogen of Blood**—Boyd is convinced that nitrogen retention does not occur in all nephritics He says that when the nonprotein nitrogen of the blood rises to 50 mg per cent it is a distinct warning of grave renal inadequacy, and is an urgent call for a rigid nonnitrogenous regimen Nitrogen values round about or over 100 mg per cent justify the gravest prognosis, but there is no definite relationship between nitrogenous retention and high blood pressure The estimation of nonprotein nitrogen of the blood is of great clinical value as a guide to prognosis and to treatment in all cases of nephritis The treatment of nitrogen retention must be principally dietetic When a nephritic with nitrogen retention comes under observation it is well, if strength permits to withdraw all nourishment, satisfy thirst with distilled water, and administer purgatives Considerable nitrogenous waste can be withdrawn by the bowel Hot-air baths or hot packs are of value After a period of twenty-four hours' rest nonprotein diet is commenced consisting of water arrowroot, cream sugar and such stewed fruits as are poor in benzoic acid, namely, apples, prunes and figs This diet can be kept up for a week or even two weeks without the patient suffering It supplies sufficient energy for the bodily requirements, and if nitrogen retention is not excessive may cause a definite fall in blood nitrogen At the end of the period milk may be added and more inspiring farinaceous foods than water arrowroot In the early stages of an acute nephritis, even when there is no nitrogen retention such a diet is always desirable, for even though the kidney may be able to excrete waste nitrogenous bodies in doing so it is working, not resting and work is not good for an organ in an active state of inflammation In chronic nephritis dietetic treatment must largely be governed by an estimation of blood nitrogen If there be no nitrogen retention it is inadvisable to keep the patient on a strict nonprotein diet, as nutrition suffers Short periods of nitrogen-free diet are often useful and beneficial to the renal function and the cardiovascular symptoms, but the patient s nutrition must always be kept in view

Journal of Tropical Medicine and Hygiene, London

April 1 XIX No 7 pp 77 88

16 *Vaccine Treatment in Streptococcal Puerperal Fever A J Chalmers and O Farrell
17 Blastomycosis (?) in Central Africa A. Y Massey

16 **Vaccine Treatment in Streptococcal Puerperal Fever**—Chalmers and O Farrell cite two cases of puerperal fever caused by the fecalis group of streptococci in which vaccine therapy was successful The first patient, a multipara, had an easy confinement which was conducted without intravaginal examination. She kept quite well for seven days when for the first time she received an intravaginal douche after which the fever began No organisms were obtained from the peripheral blood but an intra-uterine swab produced a pure growth of a streptococcus which eventually proved to be *Streptococcus versatilis* belonging to the fecalis group She at first only received antistreptococcal serum, but on admission into the hospital the uterus was thoroughly cleansed An autogenous vaccine was given in a 5 million dose six days after the preliminary dose of *Streptococcus salivarius* (stock vaccine) This vaccine also appeared to do no good and five days later the patient became obviously worse, when 200 millions of the fecalis group vaccine was administered She made a good and rapid recovery This is obviously a chronic case in which the treatment of uterine cleansing and antistreptococcal serum did much good, while the heterologous vaccine did no good, but a large dose of the homologous vaccine produced a cure

The second case was a very severe type of fever which had lasted six days, and when first seen had a temperature of 104 6 F There was much purulent discharge from the uterus The uterus was douched out with antiseptics but this had to be stopped on the third day as the patient s friends refused to allow it to be done and she had to trust entirely to vaccine therapy As some human fecal matter had been observed in the vagina it was decided to treat her at once with the same vaccine as that made from the first case, and this was done in less than twenty-four hours after the case had been first seen She received a 5 million dose, and, as the effect was to slightly lower the temperature, and as the patient showed some improvement, three days later she received 50 millions, when the temperature gradually fell reaching 100 F on the sixth day after the first vaccine dose On the next day it rose to 102 6 F in the evening, and next day (eighth day after first injection), she received 200 millions the temperature declined and reached normal on the third day after this dose, and the eleventh after the commencement of vaccine therapy, she made a good recovery

Lancet, London

April 15 II No 4833 pp 809 848

18 Acute Poliomyelitis F E Batten
19 *Importance of Auscultation in Diagnosis of Vascular Injuries Accompanying Gunshot Wounds G Makins
20 Shock and Soldier (To be continued) G E Smith
21 Standard Method of Testing Antiseptics for Wounds with Some Results W d E Emery
22 Treatment of Hemorrhoids by Injection of Two Per Cent Phenol F S Edwards
23 Methods of Preparing Sphagnum Moss as Surgical Dressing C W Cathcart
24 *Precipitin Reaction in Tuberculous Fluids S R Gloyne
25 Imperforate Hymen in Baby H R Spencer
26 Case of Imperforate Hymen W Robertson

19 **Auscultation and Gunshot Wounds**—Well recognized and charactertistic as are the murmurs produced by the existence of traumatic openings in the walls of the blood vessels, Makins is of the opinion that the routine employment of the stethoscope for their detection seems hardly so generally adopted as should be the case The importance of this method of examination is obvious in any class of wound but it is especially valuable in the case of the multiple wounds inflicted by the various forms of fragments derived from the bursting of high explosive shells and bombs Three cases are cited to emphasize the value of this method of physical examination and to impress the fact that in any case of swelling of a limb in connection with a gunshot wound the stethoscope affords a ready and certain means of establishing a diagnosis Further, observation of the point at which the bruit is loudest and highest pitched will serve to localize the exact position of the lesion Makins points out that the method is far more reliable than the uncertain practice of examining for the state of the distal pulse, for this is obliterated only if the vessel has been completely severed, or in the rarer instances in which large masses of hard clot exist to compress it, while diminution of size and force is more likely to be due to moderate pressure from without than to the existence of a lateral wound in the wall of the artery

24 **Precipitin Reaction in Tuberculous Fluids**—Four definitely tuberculous fluids were tested (three contained bacilli and the fourth, though no bacilli were found, was verified postmortem) by Gloyne. Of these four fluids three gave positive reactions (75 per cent) Fourteen fluids were also tested in which the diagnosis could not be definitely proved by the finding of bacilli, but in which a lymphocyte count, high protein content etc, strongly suggested a tuberculous origin Of these, five (36 per cent) gave a positive reaction two (14 per cent) a doubtful and seven (50 per cent) a negative result. Four nontuberculous fluids used as controls were all negative Gloyne is of the opinion that the test may be of some use in cases of tuberculous effusion in which bacilli have not been found in the fluid

Practitioner, London

April XCVI No 4 pp 347-446

27 Clinical Electrocardiography A Résume S R Wells
28 Common Aids Venesection Purgation Massage Blistering, etc. L Williams
29 Genito Urinary Surgery A Review J W T Walker
30 Hexamin Its Use and Misuse A S Erulkar
31 Citrated Whole Milk Feeding for Infants C W Vining
32 Children s Diseases A Review H Thursfield
33 Retrospect of Otology 1915 M Yearsley
34 Treatment of Rheumatic Neuralgic and Allied Pains by Ionization with Sodium Salicylate. C W Budden.
35 *Rôle of Pyorrhea Alveolaris in Causation of Chronic Bronchitis and Asthma S P Shivdas.
36 Syphilis and Yaws in Tropics. S Vassallo

35 **Pyorrhea Alveolaris in Causation of Bronchitis and Asthma**—Cases are cited by Shivdas to show that pyorrhea alveolaris is a most potent etiologic factor in the causation of these diseases In the cases in which the pyorrhea alone was treated, either a marked improvement or disappearance of the lung affection was observed, with the arrest or improvement of the pyorrhea When the lung affections alone were treated without any attention to the pyorrhea, hardly any good results were obtained, except a slight temporary relief in the symptoms in consequence of the administration of soothing and anodyne remedies When both the pyorrhea and the lung affections were treated, the asthma or chronic bronchitis either disappeared or showed improvement, with arrest or improvement of the pyorrhea

Bulletin de l'Académie de Médecine, Paris

April 4, LXXV, No 14, pp 373 395

37 *Magnet for Extracting Projectiles in the Brain L Rocher
38 Local Anesthesia for Prostatectomy F Legueu
39 *Prophylaxis of Scarlet Fever by Milne's Method G H Lemoine and Devin
40 Abscess in the Liver with Trench Diarrhea F Rathery and L Bisch
41 Amebic Dysentery in France (Sur la dysenterie amibienne autochtone) A Orticoni and P Ameuille
42 Surgical Treatment of Pseudarthrosis After Fracture of Lower Jaw (Traitement chirurgical des pseudarthroses dans les fractures du maxillaire inferieur) Cavalie

37 **The Giant Magnet as Aid in Extracting Scraps of Metal from the Brain**—Rocher shows by illustrations how the magnet causes waves in the brain tissue which help to mobilize the bullet or scrap of shell The attraction should always be applied so as to draw the bullet out by the path it entered He has made a special study of the subject on cadavers, and points out the dangers to be avoided When the foreign body is in quite deep, he interposes a narrow steel funnel, 5 cm long, fitting over the tip of the magnet It is important to draw the bullet out by its tip, and under control with the Roentgen rays it is possible to guide and draw the tip around to the best position for its extraction from the tissues

39 **Prophylaxis of Scarlet Fever, Diphtheria, etc, in Hospital**—Lemoine and Devin relate that last January a large number of cases of scarlet fever, diphtheria, measles and mumps were brought to the improvised hospital in their charge, and there was only one large hall where the men could be placed They had a few low partitions put up to mark off the sick with the different diseases, but isolation was out of the question The sole reliance was on the Milne method of prophylaxis, veiling head and chest with a gauze curtain which was sprayed with tincture of eucalyptus and an antiseptic three times a day Every three hours the throat and nasopharynx were painted with iodized glycerin and an antiseptic oil was instilled into the nasal passages These measures were done by the physician himself or by a nurse tending exclusively one group of patients When the man was allowed to get up, he had to stay in part of the room given up to suspects, and three times a day, the throat, nasopharynx and the nose were disinfected During the month this treatment was applied to 10 men with measles, 18 with scarlet fever, 16 with mumps, and 12 with diphtheria, and no case of contagion and no complications developed The method must be applied painstakingly by one who believes in it and it takes patience and perseverance When this can be realized, the period of isolation after infectious disease can be materially shortened

Progrès Médical, Paris

January 5, XXXII No 1 pp 1 8

43 Spontaneous Fracture of Bones in Foot in Tabes (Les fractures spontanees des os du pied dans le tabès) C Roubier
44 Correction of Cicatricial and Other Constriction of the Jaws (Constriction des machoires) G Pitsch
45 The Evolution of Military Surgery P Bonnette.

January 20, No 2, pp 9 16

46 Tuberculous Perinephritis M Loeper
47 Technic for Intravenous Injections H Gallais

February 5, No 3, pp 17 24

48 Transient Malignant Edema of the Eyelid (Pustule maligne des paupieres à guerison rapide) M Loeper and J Carlotti
49 Chaulmoogra Oil in Intravenous Treatment of Leprosy M Vahram
50 *Tests to Control the Hearing Capacity (Contribution à l'etude experimentale du controle auditif) H Gosset
51 Balsam of Peru Specific Against Pyocyaneus Infection of Wounds (Le pansement des plaies) H Bourgeois
52 *Sodium Perborate in Treatment of Wounds (Le perborate de soude dans le pansement des plaies) H Bourgeois

February 20, No 4, pp 25 32

53 *Operation on Hydrocele by the Inguinal Route (La cure radicale de l'hydrocèle vaginale par la voie inguinale J P Tourneux
54 *Differential Diagnosis of Syphilis of the Mouth (Syphilis de la bouche Gommes perforantes du voile du palais) Gaucher

50 **Tests to Control the Hearing**—Gosset mentions a number of means with which simulation or exaggeration of deafness is readily detected during lip reading exercises

52 **Sodium Perborate in Treatment of Wounds**—Bourgeois applies the sodium perborate as a dry powder As it becomes moistened by the secretions it generates oxygen and acts like the ordinary solution of hydrogen dioxid, only that it is alkaline He fills up the wound cavity with the powder, without draining, with a flat dressing above, renewed every day at first

53 **Operative Treatment of Hydrocele by the Inguinal Route**—Tourneux comments on the disadvantages and complications liable to follow an operation on the scrotum to cure hydrocele, especially the difficulty of ensuring and maintaining asepsis in this region There is often a tendency to inguinal hernia, also, in men with hydrocele, especially the congenital There are thus a number of advantages in operating on the hydrocele through an inguinal incision, as Gomoiu and Phocas have been doing with great success They had published by 1914 sixty-eight cases with unfailingly excellent results It is very easy to draw up the testicle through an incision in the inguinal or inguinal-pubic region, an assistant pushing it up from below The tunica vaginalis soon presents in the incision and is seized with two forceps and evacuated Then the testicle is drawn out and the serosa is turned as by the usual technic, resecting it or not as indicated Phocas punctures and evacuates the hydrocele as the first step, but Tourneux does not think this is necessary but rather a drawback as it is easier to find and hold the vaginalis when it is distended He has been much impressed with the ease, simplicity and ideal results of this method of treating hydrocele It takes only a few minutes and the incision heals promptly as held together with clips The reaction inside the scrotum is much less than with the scrotum incision, the patient is kept in bed but a few days—Phocas says only two or three—and he can leave the room in seven or eight Tourneux thinks that this principle of access through the inguinal region could be applied to a number of other affections of the testicle and cord

54 **Syphilis of the Mouth**—Gaucher expatiates on the necessity for bearing the possibility of syphilis in mind whenever a sore throat shows a median predominance of the lesions, or when a syphilitic complains of sore throat Ordinary sore throat usually concentrates on the tonsils and their vicinity When the finger feels a deep hardness in the velum you are justified in asking as you palpate the palate "When did you get your syphilis?" Tuberculous ulceration of the velum is rare and is more painful than the syphilitic, and is surrounded by yellow points, the miliary tubercles Syphilitic lesions of the tonsils are rare, but there is a febrile type, a type that resembles epithelioma, and a gangrenous type usually from secondary infection The limitation to one side and the absence of glandular involvement help in differentiation Gaucher adds that as potassium iodid is said to promote epithelioma, it is better not to give it in dubious cases, mercury is always available A solitary gumma in the pharynx is liable to be mistaken for an ordinary tumor Diffuse syphilitic lesions of the palate and pharynx have such an insidious onset that irreparable damage may have been done before their presence is suspected Any change to a more nasal tone to the voice is suspicious, and redness or other sign of anything wrong in the mouth or throat of a syphilitic calls at once for careful palpation throughout

Monatsschrift für Kinderheilkunde, Berlin

VIII No 11 pp 477 516

55 Epidemiologic Study of Measles (Masernfragen) H Wagener
56 *Extractives in Infant Feeding (Bedeutung der Extraktivstoffe fur die Ernahrung) P Heim
57 *Intussusception in Infants (Darminvaginationen im Kindes und Sauglingsalter) M Nagel
58 *Anemia and Enlargement of the Spleen in Girl of Nine (Hochgradige Anamie mit Milztumor—Pseudo Banti—beim alteren Kinde als Folgeerscheinung septischer Infektion in den ersten Lebenswochen) H Kleinschmidt
59 *Is There an Initial Fever in Tuberculosis? (Zur Frage des Tuberkulose Initialfiebers) H Kleinschmidt

55 **Measles Problems** —Wagener studied some epidemics of measles in five different towns during 1913 but was unable to find anything to confirm the assumption that measles can be transmitted by inanimate objects or by healthy persons A schoolroom of children becomes infected by one or more of the children having been exposed outside the school Each infects those in its immediate vicinity alone, and these in turn others until all in the room have been infected by the end of three weeks This phase is followed by the period in which the children at home too young to go to school, and the adults become infected This sequence of events can be clearly traced in places with a one room schoolhouse An epidemic develops only after an interval of at least three years since the last general epidemic of measles Those who escape a general epidemic are the children under 5 months old at the time All who escape are thus below the school age, as all the schoolchildren who have not already had measles contract it without exception during a village epidemic The epidemic reaches its height in twenty-five or six days and then declines the younger children and adults infection representing the declining period Among the 694 cases of measles in the five different localities, complications were observed in 27 26 per cent including 77 cases of otitis media, 54 of conjunctivitis, bronchitis in 18 and pneumonia in 9 while 27 children were left with chronic enlargement of lymph glands, 15 with severe anemia and 12 with chronic disease of the middle ear He found no instance of primary immunity The exanthem showed invariably in the throat when the children were examined during the days just preceding the skin eruption, in one case it appeared before Koplik s spots

He found no instance in which a child escaped the disease when exposed for the first time after the age of 5 months None under 4 months old developed measles and only one infant of five months although all were in constant contact with brothers or sisters with the disease He thinks it is possible that young infants escape because they breathe only through the nose and thus the measles germs do not have free access to the throat If an infant s nose is stopped up this protection is lost, the infant is as liable then to contract measles as older children Wagener is convinced that transmission by fomites is practically impossible and he has long omitted precautions in this line and has never had a case of transmission traceable to this omission He calls attention further to the fact that over 49 per cent of persons who had already had typical measles in former epidemics, developed symptoms on the part of the upper air passages digestive tract sore throat or conjunctivitis, while other members of the family were having measles These disturbances were observed exclusively in 183 families where there were cases of measles, and they never reached a degree beyond that observed with such phenomena as complications or part of measles They coincided further, with the measles in the family There is little doubt that the disturbances were the work of the measles germ, and hence that the individuals were carriers—for the time being—and liable to spread the disease There is much evidence to prove that these carriers are responsible for the instances of transmission of the disease which have been attributed hitherto to transmission by fomites or healthy third parties

56 **Importance of Extractives in Infant Feeding** —Heim relates that twenty-five guinea-pigs fed exclusively on cow s milk all died in from four to fifteen days, others died promptly likewise when cellulose was added to the milk, but the animals developed normally when malt extract was added to the milk-cellulose mixture He prepared an alcoholic extract of the germinating barley, and this seemed to contain some substance able to compensate for the deleterious action of the cow's milk Seven infants not thriving on cow s milk seemed to benefit likewise from this extract of germinating barley, his results confirming those of Aron and emphasizing that we must pay more heed to the extractives henceforth in artificial feeding of infants

57 **Intussusception of the Intestines in Children** —Nagel reports three cases in infants six or seven months old, one his own child The invagination corrected itself spontaneously in one the nature of the disturbance not being recognized In the others it subsided in less than thirty hours under injections of water or oil, a pint and a half, from a height of 30 inches, with the pelvis raised The injection was repeated every two or three hours until the desired result was attained, five or six were generally enough The intussusception is reduced the more readily the nearer the anus Blowing air into the intestines with a T tube and bulb has also proved successful in some instances With much vomiting lavage of the stomach is useful To quiet the bowels after the injections, small doses of opium may be useful Hirschsprung recommends cautious massage This is scarcely feasible, however, unless the invaginated portion can be palpated Nagel strongly advocates examining the abdomen and rectum under general anesthesia This alone may break up the invagination

There is scarcely any other affection in infancy which strikes so like lightning from a clear sky Nagel's own healthy infant was nursing happily in perfect health when it suddenly screamed, became livid its limbs hanging loose, the breathing deep and slow the pulse imperceptible, the abdomen relaxed The child lay in complete apathy, its body cool This state lasted for three minutes and then a few slow movements of its limbs followed Then it screamed again and sank anew into the alarming apathy and atony, which lasted five minutes this time Then came a restless sleep during which it moaned and grimaced A third attack followed succeeded by a brief, leaden sleep The pallor was not so extreme by this time but the pulse was small and fast, the limbs relaxed and no attempt to move them was made Palpation of the soft abdomen seemed to hurt the child a little but no special tender point could be found While being examined it vomited and then had another attack of pain after which it slept again As it slept it seemed to be regaining its normal aspect and when it woke, sat up and played as if nothing had happened It passed a few hours later a stool of almost exclusively fresh blood and mucus, and the stools showed mucus for several weeks but no blood The boy is now 4 years old, strong and well, and has never presented any such symptoms since In the second case, there were four or five of the attacks and one followed an enema of ¾ liter of tepid water, but then there were no more The first day there had been three stools of almost exclusively blood and mucus There was no fever in either case and no recurrence during the years since In the third case the attacks continued for a day and a half diminishing in intensity Enemas of a liter of tepid water seemed to relieve, but there is nothing to show that they corrected directly the invagination Hirschsprung s eleven cases all terminated fatally

58 **Intense Anemia with Enlarged Spleen in Girl of 9**—Kleinschmidt describes the puzzling syndrome and the numerous futile attempts to explain it before it was finally traced to the results of severe and protracted septic suppuration of the umbilical cord the inflammatory process evidently having involved the portal vein Türk has published two similar cases and Epstein one in which there had been multiple phlegmonous processes The syndrome is characterized by recurring hemorrhages in the gastro-intestinal tract entailing extreme anemia with exhaustion of the bone marrow and enlargement of the spleen The child has improved and is doing well on a diet rich in vegetables, for the iron in them and for correction of constipation, the tendency to hemorrhage is combated by continuous systematic administration of calcium chlorid

59 **Initial Fever with Tuberculosis**—Kleinschmidt thinks that the assumption of an initial fever in tuberculosis will have to be deferred until more data have been accumulated He reports the case of an infant nursed by the mother in the last stages of consumption After her death the child seemed to be thriving and its temperature was constantly normal until the fifty-first day when the Pirquet test elicited a positive reaction The temperature persisted normal for another two weeks, but then rose and other symptoms of generalized tuberculosis rapidly followed, fatal at the age of 3 months

Munchener medizinische Wochenschrift, Munich

February 8, LXIII, No 6, pp 185 224

60 Removal of Foreign Bodies Under Direct Roentgen Ray Control (Die operative Aufsuchung der Fremdkörper unter unmittelbarer Leitung des Röntgenlichtes) Holzknecht

61 Zinc Filters for Roentgen Rays (Das zweckmässige Filter der Rontgentiefentherapie) H Wintz and L Baumeister

62 Intramuscular Colloidal Silver in Small Doses in Treatment of Inflammatory Processes (Einige Beobachtungen bei Kollargolinjektionen in kleinen Dosen) Gellhaus

63 Interim Spring Artificial Leg (Eine federnde Uebergangsprothese) G Frank

64 Severe Poisoning with Acetylene Gas, Two Cases. (Ueber Vergiftung mit Azetylengas) Nicol

65 Functional Capacity and Development of Organs (Arbeitsleistung und Organentwicklung) M Gerhartz

66 Filters in Phototherapy (Lichtfilter) C Dorno

67 Legal Decisions of Interest to Physicians (Der Arzt in der Rechtsprechung) P Kaestner

68 Fistulas and Abscesses After Wounds of the Skull (Die Schädelfistel und der Gehirnabszess nach Schussverletzung) O Witzel

69 Sequesters Keep Up Persisting Fistulas After Fractures in War (Die abschliessende Sequestrotomie nach Schussfraktur) P Janssen

70 Treatment of Contractures P Erlacher

71 Aneurysms of Femoral Artery (Zur Kasuistik des Aneurysma der Schenkelarterie) M Flesch

72 The Task of the Assistant at a Trephining Operation (Merkblatter für Feldunterarzte X) E Rotter

73 Improved Litter for the Trenches (Verbesserung an der behelfmassigen Trage) H Humann

74 Orthopedics for the Wounded (Kriegsorthopadie in der Heimat) G Hohmann, F Lange and F Schede To be continued

75 *Prolonged Warm Soapy Bath in Treatment of Gas Phlegmon Nahmmacher

75 **Treatment of Gas Phlegmon**—Nahmmacher placed the leg in a tub of soapy water, kept constantly warm for two hours and gave camphor and morphin The gas phlegmon had developed after a shell wound of the calf, and extended from toes to knee, having developed suddenly The leg was amply incised and drained and, after the bath, was kept raised and hydrogen dioxid poured freely every half hour on a gauze sheet laid over it Improvement was prompt and pronounced

Gazzetta degli Ospedali e delle Cliniche, Milan

March 31, XXXVII, No 26 pp 401 416

76 Study of the Urine Albumin Soluble in Acetic Acid (Sulla cosidetta albumina acetosolubile della orine) E Cavazzani

77 Vaccine Therapy of Typhoid (La vaccinoterapie del tifo nella pratica medica) G De Lucchi

April 2, No 27, pp 417 432

78 *Premature Menopause From Pituitary Derangement (Menopausa precoce Sindrome ipofisaria Opoterapia) G Jona

78 **Premature Menopause and Pituitary Treatment.**—Jona relates that the menopause came on after an attack of puerperal fever at the age of 29 Besides the amenorrhea a tendency to obesity, hypertrichosis and polyuria developed, with vascular crises and change of character After ten or twelve years pituitary treatment was begun, and before long menstruation returned and the general health improved, the menopause thus retrogressing This case of premature and pathologic menopause emphasizes anew the share of the mechanism for internal secretion in the normal menopause, and it accentuates the pituitary element The case is further interesting as showing the possibility of menstruation returning, after a pause of twelve years, under the influence of hypophysis treatment, which caused also the subsidence of certain still persisting climacteric disturbances The woman was under intermittent pituitary treatment from August to March, and menstrual hemorrhages had returned regularly the last five months, to date of writing

Policlinico, Rome

April 2, XXIII, No 14 pp 421 452

79 Influence of Staphylococcus Aureus on Rat and Mouse Cancer (L'influenza dello stafilococco aureo sui tumori maligni) P Mariconda

Riforma Medica, Naples

February 14, XXXII, No 7, pp 169 196

80 Gas Gangrene from Wounds in War (Su 4 casi di gangrene degli arti da ferite d'arma da fuoco) P Guizzetti

81 Pathogenesis and General Etiology of Deformity of the Human Body C Romano Commenced in No 5

February 21, No 8 pp 197 224

82 *Grafts and Implants in Biology and in Surgery (Dei trapianti ed innesti in biologia ed in chirurgia) R Minervini

83 *The Protective Ferments in Tuberculosis (Ricerche sulla reazione di Abderhalden nella tubercolosi) L Datta

84 Epidemic of "Fourth Disease" A Montefusco Concluded in No 9

February 28, No 9, pp 225 252

85 Phenol in Treatment of Tetanus (Sulla terapia del tetano) S Fichera

86 Case of Interlobar Purulent Pleuritis. L. Pedrini

March 6 No 10, pp 253 280

87 To Get Rid of Lice (Sulla profilassi del pediculus hominis.) G Izar

88 *The War and Venereal Disease (Guerra e problema sessuale) F De Napoli

89 *Splenectomy in the Pathology of the Liver and Blood (Estirpazione della milza nella patologia del fegato e del sangue) L Silvestrini

82 **Grafts and Implants in Biology and Surgery**—Minervini has had considerable experience in this line and here reviews the results accomplished by himself and others He declares that as the capacity for growth of the tissues is greater the younger the tissues, there is every reason to assume that grafts from fetus and newly born cadavers offer the maximum prospects for success He has been thus using for ten years embryonal tissues for free grafting in his surgical work Skin from fetuses and still born infants proved exceptionally useful to cover the raw spaces after extensive burns The skin of fetuses of the seventh, eighth or ninth month was used fresh or after having been kept for a few hours or days Flaps transplanted from the back or chest of the fetus or new-born infant grow rapidly to the tissues and become solidly fastened in a few days His communication commending the use of embryonal tissues was published in 1911 and a later report was read at the last international medical congress

83 **Abderhalden Reaction in Tuberculosis**—Datta got positive results in the early stages of tuberculosis but not in the advanced cases The findings were positive also in some of the supposedly healthy persons tested and also in some patients with nontuberculous affections

88 **War and Venereal Disease**—De Napoli discusses the general measures for prophylaxis of venereal disease adopted in recent wars and in the present war He advocates in prophylaxis means to prevent clandestine prostitution, collecting the women in brothels kept under strict medical supervision, with medical inspection at regular and unexpected hours, each establishment to be equipped with a sanitary toilet room near the entrance where a trained attendant should inspect the man as he enters and apply measures to sterilize and protect, and again as he is ready to leave, in addition to the hot water and mercuric chlorid solutions for immediate cleansing which should be always in readiness for immediate use De Napoli relates that he knows of instances in which venereal disease was intentionally acquired to obtain sick leave In his service at Bologna he has been impressed not only with the frequency of venereal diseases, but with the predominance of the ulcerating forms

89 **Splenectomy in the Pathology of the Liver and Blood**—Silvestrini found that rabbits bore the removal of the spleen without disturbance, but they did not develop quite as well as the controls The liver showed no signs of anything wrong at first, except possibly a lesser production of bile But gradually hyperplasia of the lymphatics developed, first in the vicinity of the portal vessels and then inside the liver lobes This hyperplasia is evidently a compensating process in the lymphatic elements in the depths of the liver, it explains the increase in size of the liver which follows removal of the spleen There were also slight changes en-

dent at certain points in the liver, suggesting that the liver tissues had become less resistant to abnormal influences These changes occurred indiscriminately in the different lobes of the liver On the basis of these findings and those reported by others, Silvestrini advocates splenectomy in chronic hemolytic jaundice with enlargement of the spleen also in hemolytic anemia and in malaria with much enlarged spleen and rejects it in generalized leishmaniosis in infantile anemia with splenomegaly, hyperglobulia with splenomegaly, and in leukemia He presents the arguments for operation or abstention in these conditions emphasizing the class of cases in which this 'medical surgery' is especially indicated in the hope to act on the general disease by removing the spleen

Brazil-Medico, Rio de Janeiro

March 11 XXX No 11 pp 81 88

90 Prophylaxis of Tuberculosis (Sobre a profilaxia da tuberculo e A vida ao ar livre e a cultura fisica) P Barbosa Commenced in No 9
91 Atypical States of Degeneracy (Estados atypicos de degeneração) H Roxo

March 18 No 12 pp 89 96

92 Syphilis of the Stomach (Contribuição ao estudo clinico da syphilis do estomago) O Clark To be continued

March 25 No 1 pp 97 104

93 Flies and Carriers as Sources of Typhoid at Rio (Febre typhoide no Rio de Janeiro) E Gomes

92 **Syphilis of the Stomach**—Clark advocates a course of treatment as for syphilis in all cases of stomach trouble before resorting to operative measures, as syphilis of the stomach assumes such protean manifestations The chronic nature, the exacerbations at night absence of free hydrochloric acid and gastric achylia are presumptive evidence of syphilis of the stomach especially when the Wassermann test is positive In one of his own cases the syphilitic stenosis of the pylorus in a tabetic was accompanied by a negative Wassermann He comments on the exceptional frequency of syphilis of the stomach at Rio he encountered six cases last year The general practitioner is the one who sees these stomach cases first and hence his proper differentiation of them is of paramount importance Clark is convinced that the number of cases which escape detection is considerable They may run an entirely latent course until suddenly they entail severe hemorrhage This occurred in two of his cases In two others there was likewise severe hemorrhage but it had been preceded by violent pains in the stomach None of these four patients succumbed to their profuse hemorrhages Another patient had had severe hematemesis on three occasions in the course of several months before the syphilitic nature of the trouble was suspected Treatment as for syphilis was then given, and there has been no further trouble from this cause during the three years since He gives an illustration of the necropsy findings in a case of supposed chronic ulcer of the duodenum After a profuse hemorrhage, operative treatment was applied and the patient died Necropsy revealed a large and ulcerating gumma close to the pylorus, adherent to the pancreas No one had thought of applying the Wassermann test In some other cases tentative mercurial treatment just before a contemplated operation, rendered the latter unnecessary

Two of his patients had been martyrs for years to chronic dyspepsia with nausea and vomiting and had run the gamut of therapeutic measures, none giving relief until specific treatment was tried when a cure soon followed The cure has been complete during the several years to date He reports with much detail his various cases, emphasizing the differential points

Mitteilungen a d. med Fakultät der k Univ, Tokyo

XV No 1 pp 1 241 German ed Last indexed March 18 p 929

94 *Two Cases of Progressive Inflammation and Hypertrophy of Interstitial Tissue of Nerves With Necropsy in One Case (Ueber Neuritis interstitialis hypertrophica et progressiva—Dejerine und Sottas) K. Yokomori
95 Atypical Congenital Myotonia With Tetanic Symptoms (Zur Kenntnis der atypischen Thomsenschen Krankheit kompliziert mit Pseudohypertrophie und Atrophie der Muskulatur und tetanischen Symptomen) Y Kato
96 *Blastomycosis of the Meninges (Ueber Blastomycetenmeningitis) K. Goto
97 *Bradycardia From Deficient Thyroid Functioning (Die durch die Hypofunktion der Schilddruse bedingte atrioventrikulare Automatie des Herzens) S Sakai
98 Total Heart Block (Klinisch experimentelle Beitrage zum totalen Herzblock) K Marui
99 *Substance in Expired Air Inhibiting Catalysis of Blood and Platinum (Ueber eine Platin und Blutkatalyse hemmende Substanz in der Ausatmungsluft des Menschen) Y Takasaki
100 *The Internal Secretion of the Kidney and Its Influence in Regulating the Sugar Content of the Blood (Zur Kenntnis der inneren Sekretion der Niere und ihre Bedeutung für die Blutzuckerregulation) T Itakura

94 **Progressive Neuritis with Hypertrophy**—Yokomori reports two cases of the affection described in 1893 by Dejerine as *névrite interstitielle hypertrophique et progressive* Yokomori s patients were a farmer of 74 and his son, a bank clerk of 38 The first symptoms developed in the forties and twenties a weakness in the legs, with gradual inability to hold the foot up—paralytic talipes equinus varus Atrophy of the muscles in legs and hands followed in time The tendon reflexes were all abolished, but the coordination of muscular movement was unimpaired, as also sphincter functioning Nos of the peripheral nerves could be palpated as thickened and hardened and necropsy in the first case showed that this was due to peculiar changes in the sheath of Schwann and the interfascicular connective tissue The cases are compared with the few analogous ones on record and the points differentiating them from somewhat similar nervous affections are emphasized Five plates accompany the article, one colored to show the contrast staining

96 **Blastomycotic Meningitis**—Goto's patient was a member of the legislature, 61 years old A three page clinical chart of his case is given, with three colored plates showing the necropsy findings in the brain and meninges and in the lungs of mice inoculated with the cerebrospinal fluid The main symptoms had been headache, tinnitus, deafness, persisting cold in the head anosmia and diplopia, with pains in the right leg and reduced sensibility in the right trigeminal region During the seven month's course there was no fever until toward the last, when symptoms of meningitis became pronounced From the first were noticed right abducent paralysis and atrophy of the right half of the tongue The fluid at lumbar puncture the fifth month was under high pressure and contained blastomycetes and 3 or 5 1 000 albumin No point of entry for the blastomycetes could be discovered but innumerable blastomycotic nodules were found on the pia, containing blastomycetes and giant cells in profusion

97 **Bradycardia of Thyroid Origin**—Sakai gives several charts and tables to show the course and details in a case of disturbance of impulse production, auriculoventricular automatism with pronounced bradycardia—pulse 42—all evidently traceable to irritation of the vagus nervous system The data presented demonstrate that this irritable condition of the vagus is the result of lack of the normal thyroid secretion The thyroid functioning was at a very low ebb, and the heart disturbance could be corrected at will by injecting atropin by exercise and baths or by thyroid treatment The patient was a woman of 42 who had long had an apparently ordinary goiter and complained of loss of hair and menorrhagia Sakai says that he knows of no analogous case on record in which impaired functioning of the thyroid was responsible for abnormal impulse production of this type in the heart

98 **Total Heart Block**—Atropin had no appreciable influence on the total heart block in one of Marui s two cases In the second the ventricle beat increased by eight beats, showing that even with total heart block the vagus may ve exert a certain control over the ventricle Injection of epinephrin in the first case, a working man of 59 induced the bigeminus picture, the extrasystoles with the total heart block are ascribed to stimulation of the accelerator nerves Under the influence of the epinephrin the pulse became accelerated and at the same time the rare phenomenon of interference was observed There was evidently pronounced sympatheticotony, with extreme susceptibility to epinephrin The electrocardiograms and other tracings show the peculiar features of the two cases

99 **Chemical Action of Substances in Expired Air**—Takasaki reviews the literature on the toxicity of expired air and reports personal research in this line Ikeda recently found that some substance in expired air was able to inhibit the hydrogen dioxid-splitting power of colloidal platinum Takasaki has been repeating his experiments and has confirmed his statements The substances condensed from the water with the expired air check catalysis of colloidal platinum and also of blood catalase This substance in the expired air cannot be either ammonia or carbon dioxid The inhibiting property was found least pronounced in persons with diabetes insipidus and adiposogenital dystrophy, and greatest in patients with cirrhosis of the liver The substance in question is probably formed in the gastro-intestinal tract and eliminated through the lungs On the other hand, none of the animals injected with the substance showed any signs of toxic action

100 **The Internal Secretion of the Kidneys in Connection with the Sugar in the Blood**—Itakura relates that the sugar content of the blood became much higher in an hour or hour and a half after the veins or arteries of the kidneys had been tied off The increase was much higher after ligation of the veins than of the arteries This effect was less apparent when much blood had accumulated around the kidney These facts are accepted as evidence of an internal secretion in the kidney which keeps the blood sugar within normal range Even the extravasated blood from the kidney is capable of maintaining the control Still more striking testimony is the fact that the abnormally high sugar content in the blood after ligation of the renal vein could be brought down to normal by subcutaneous injection of blood from the renal vein of another, nontreated animal

Prakticheskiy Vrach, Petrograd

XV No 1 pp 1 12

101 Case of Complete Transposition of Viscera With Duplication of Left Ureter (Situs inversus completus s udvoeniem lievago mochetochnika) Komendantoff

No 3 4, pp 21 32

102 Spina Bifida, Three Cases D E Gorokhoff

No 5, pp 33 44

103 Chronic Pancreatitis M Einhorn (New York) Commenced in No 2

No 6 pp 45 56

104 Diagnosis of Localization of Point of Injury of Blood Vessel in Wounds of the Legs (K diagnostiki miesta zakuporki sosudov pri gangrenie nizhnikh konechnostei po dannim, poluchennim pri perevyaskie sosudov) V M Volkovitch Commenced in No 5

No 7, pp 57 68

105 Conservative Treatment of Acute Otitis Media With Opium L N Kogan Commenced in No 6

Russkiy Vrach, Petrograd

XV No 7, pp 145 168

106 *The Pediatrician in the Campaign Against Infant Mortality T D Roumianzeff

107 Foreign Bodies in the Eye (Ob inorodnikh tielakh v glaznitzie) A M Nikolsky

108 *Elimination of Sodium Chlorid in Scarlet Fever, the Chlorometer of Dr R Weiss (O vidielenij povarennoi soli pri scarlatinie) S E Ostrovsky Commenced in No 5

109 Case of Natural Separation of Vermiform Appendix P A Gloushkoff

110 Technic for Bloodless Operations on the Skull (K tekhnikie pred varitelnago obezkrovlivania pri operatziakh na cherepie) U U Djanelidze

111 Registration of Respiration in Frogs (Registratzia dikhanii u liagushek) I P Michailovsky

No 8 pp 169 192

112 *Recurrence of Gallstones After Removal of the Gallbladder (O vozvratakh zhelchnokamennoi boliezni poslie udalenia zhelchnago puziria) A A Kadian Commenced in No 7

113 Explosive Bullets in the Present War E V Pawlow

114 Possible Droplet Transmission of Typhus Fever (K voprosu o zarazhenii cipnim typhom) V K Stefansky

115 Prophylactic Inoculations Against Typhoid and Cholera V I Nedrigailoff

116 *Iodin in Ophthalmic Surgery (Opit primienenia sposoba Grossich'a v glaznoi chirurgiy) B B Orechkin

106 **High Infant Mortality in Russia**—Roumianzeff points out in his article the fact of the tremendous infant mortality in Russia He says that it is higher there than any where else in the world among civilized nations Of the five or six millions of new-born children each year, a million and a half die before they reach the age of one year In some regions of European Russia up to 600 of every 1,000 succumb, that is, over 50 per cent, in contrast to the 7 or 8 per cent infant mortality in Sweden and Norway The causes he traces to poverty, ignorance, and lack of suitable social and economic factors, combined with insufficient and improper infant nursing and care, and also the frequency of gastro-intestinal disorders in children These dangers are multiplied by severe infectious diseases, such as scarlet fever, measles, etc Measures for infant welfare and for reduction of infant mortality are now realized as matters of national importance in Russia, and have been officially taken up by the government

108 **Elimination of Sodium Chlorid in Scarlet Fever**—Ostrovsky's conclusions are as follows In the initial stages of scarlet fever there is retention of chlorids, as well as in relapses of scarlet fever, from the tenth to the twentieth day of the disease the amount of sodium chlorid eliminated rises in waves In some cases the wavelike rise is followed by a wavelike fall A surplus amount of sodium chlorid given with the food is eliminated by the patient during the two or three following days Weiss' apparatus was found very accurate and superior to any other method of which he knows for quantitative determination of the sodium chlorid in the urine

112 **Recurrence of Gallstones After Removal of Gallbladder**—Kadian reports in detail a case of cholelithiasis successfully operated on with removal of the gallbladder Six years after the operation the patient returned to the clinic with new symptoms of cholelithiasis Operative treatment was applied anew and at the second operation a new formed gallbladder was found, continuous with the common bile duct The latter contained about ten cholesterin stones (cholesterin 76 per cent and bilirubin 17 per cent) Kadian gives a review of 28 cases somewhat similar which he gathered from the literature In his case a small stone must have been, he thinks, left in the common bile duct It kept gradually increasing in size, during the six years, because of deposits of bilirubin salts The origin of the gallstones he ascribes to the liver itself True relapses with new formation of stones are exceedingly rare To prevent recurrence, the operation must include not only the removal of the gallbladder and the stones within, but opening up of the common bile duct and removal of all concretions The cystic duct must be ligated as low as possible to avoid formation of a diverticulum to form a new gallbladder No ligatures, sutures or gauze threads should be left in the duct

116 **Iodin in Operating on the Eyes**—Orechkin used 5 per cent alcoholic tincture of iodin with brilliant results in numerous ophthalmologic operations The patient's lids, portion of forehead, corresponding side of the nose, cheek and temporal region were painted with the 5 per cent tincture Moist regions and the eye secretions are dried previous to the application of the iodin solution The latter must be always freshly prepared The burning sensation caused by the iodin may be quite severe, in spite of preliminary cocainization, but disappears in a few minutes After the painting with iodin, the conjunctival sac, in operations on the eyeball is flushed copiously with a sterile 1 5,000 solution of cyanid of mercury None of the 237 cataract operations gave suppuration, while with other antiseptic methods he had suppuration in 2 per cent, with subsequent loss of the eye In 1,200 other operations on the lids and adjacent portions only in five cases was there suppuration in the sutures, and he explains this complication by the low grade of intelligence of the majority of his patients He comes to the conclusion that Grossich's method of disinfection of the operative field is the best and that it should be given preference also in ophthalmic surgery

Hygiea, Stockholm

LXXVIII No 6 pp 353 416

117 Colon Entirely on Right Side in Young Woman (Om ett fall av dextroposition av colon) S Tengström

118 Anthropologic Study of Tubercles on Inner Surface of Lower Jaw Bone (Typologiska studier over spina mentalis interna h s människan) G Backman

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A STUDY OF 1,153 CASES OF SCARLET FEVER

WITH ESPECIAL REFERENCE TO THEIR SEQUELAE *

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It is the primary purpose of this paper to report on an investigation into the sequelae of scarlet fever It has been possible in addition, to examine some general characteristics of the cases under review, and these, too, will be considered in the report The plan which has been followed was developed in a study of the sequelae of typhoid fever,[1] namely, to trace the condition of the survivors of the disease as far as is possible through an interval of four or five years subsequent to recovery, and to note especially the occurrence of any undue number of deaths during this period from causes which may be considered sequelae of the primary disease In the case of typhoid fever, I was able to show that, in a series of 1,428 cases in which the patients had survived the attack of that disease, the mortality during the three following years was twice as great as was to be expected from the age, sex, and color of the group This high rate of mortality resulted from an increase in the number of deaths from tuberculosis and organic heart disease In view of the well known effect exerted by scarlet fever on the heart and kidney tissues, it seemed likely that an analogous condition of high subsequent mortality might be found to prevail In any case, it was desired to measure exactly the conditions which actually arise

The records of the Visiting Nurse Service of the Metropolitan Life Insurance Company again gave us the original material for the investigation There were 1,153 cases of scarlet fever in the two years 1911 and 1912 among white persons The patients were all treated by physicians The accuracy of the diagnosis was in little or no doubt, and the records in other respects were fairly complete and trustworthy The patients were all policyholders of the company, and their whereabouts and physical condition could readily be traced during the subsequent years For those patients who died, full and comprehensive medical records were at hand for examination

Table 1 shows the distribution of the 1,153 primary cases by sex and by age period

Nearly 82 per cent of all the cases were among children between 2 and 10, the company has no policyholders in the first year of life The greatest disposition to the disease is found among children from 3 to 7 years of age, 637 cases, or 55 2 per cent of the total, were found within these five years of life The period 11 to 15 presents an appreciable number of cases, but after this period the cases are few and far between, all of them amounting to only 6 9 per cent of the total We are, therefore, concerned primarily with children In this respect our series agrees substantially with other scarlet fever series McCollom, for example, reports that 75 per cent of his patients treated at the Boston City Hospital were between the ages of 2 and 10, and 50 per cent between the ages of 3 and 7 The figures for Willard Parker Hospital cases are very similar There is apparently no important distinction in this respect between the two sexes

TABLE 1 —DISTRIBUTION OF 1 153 CASES OF SCARLET FEVER BY SEX AND AGE

Age	Males and Females		Males		Females	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
All Ages	1 153	100 0	501	100 0	652	100 0
2 to 10	941	81 6	433	86 4	508	77 9
2 to 5	503	43 6	254	50 7	249	38 2
2	103	8 9	63	12 6	40	6 1
3	132	11 4	57	11 4	75	11 5
4	148	12.8	73	14 6	75	11 5
5	120	10 4	61	12.2	59	9 0
6 to 10	438	38 0	179	35 7	259	39 7
6	123	10 7	54	10 8	69	10 6
7	114	9 9	47	9 4	67	10.3
8	76	6 6	31	6.2	45	6 9
9	65	5 6	22	4 4	43	6 6
10	60	5 2	25	5 0	35	5 4
11 to 15	132	11 4	53	10 6	79	12 1
16 to 20	43	3 7	11	2 2	32	4 9
21 to 30	24	2 1	4	0.8	20	3 1
31 to 40	13	1.1			13	2 0

Not only are the children at the youngest ages more susceptible to scarlet fever, but it appears that these children also take the disease in the severest form This is evidenced by Table 2, which presents lethal rates for the number of deaths per hundred cases treated, classified by age

There were in all ninety deaths in the total of 1,153 cases, this represents a lethal rate of 7 8 per cent At age 2, next birthday, 15 5 died out of every hundred treated For the age period 2 to 5 the lethal rate is 10 1, and for the entire period 2 to 10 the lethal rate is 8 8 Thereafter the lethal rate decreases very appreciably The very high figure for the age period 31 to 40 is of no significance, since the number of

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* The writer is indebted to Dr Lee K Frankel for his courtesy in putting the records of the Visiting Nurse Service of the Metropolitan Life Insurance Company at his disposal for this study

[1] Dublin L I Typhoid Fever and Its Sequelae Am. Jour Pub. Health 1915 v No 1

cases was only thirteen and the number of deaths one, altogether too small a group to give reliable returns

The figures for our series are again in close agreement with those of other observers The lethal rate of scarlet fever varies considerably with time and place, depending on the severity of the epidemic An average of 8 4 per cent is given by McCollom on the basis of over 37,810 cases in Boston, covering a period of twenty-eight years Some hospital figures show a somewhat higher lethal rate According to Osler, 90 per cent of all the scarlet fever deaths are of children under 10, our figure was 92 per cent As our cases were drawn from all parts of the country, no particular epidemic is unduly represented, and the findings are close to the best previously reported averages for large series of cases covering many years

TABLE 2—LETHAL RATES PER HUNDRED CASES TREATED FOR SCARLET FEVER, CLASSIFIED BY AGE

Age	Number Treated	Number Died Under Treatment	Lethal Rate per 100 Cases Treated
All ages	1 153	90	7 81
2 to 10	941	83	8 82
2 to 5	503	51	10 14
2	103	16	15 53
3	132	16	12 12
4	148	11	7 43
5	120	8	6 67
6 to 10	438	32	7 31
6	123	14	13 38
7	114	7	6 14
8	76	3	3 95
9	65	6	9 23
10	60	2	3 33
11 to 15	132	4	3 03
16 to 20	43	1	2 33
21 to 30	24	1	4 17
31 to 40	13	1	7 69

The 90 deaths showed complications in 62 cases In 11 of these there was a distinct kidney involvement Heart conditions were recorded in 7 fatal cases Pneumonia was present in 13 cases There were 4 cases of meningitis and 1 case of otitis media In 9 cases the scarlet fever was complicated by the presence of other acute infections like diphtheria or measles The other complications are few in number, and are too vaguely stated to justify special attention Among the 1,063 survivors we find similarly a record of 31 cases of nephritis, 31 cases of otitis media, 22 cases of adenitis, and 11 cases of pneumonia It is very probable, however, that in the nonfatal cases the complications were not stated as fully as could be wished, certainly not as fully as is usually done in hospital practice Osler, for example, records the presence of nephritis in from 10 to 20 per cent of his cases Heart complications are also recorded in higher proportions in other series Middle ear trouble is reported in 20 per cent of all cases by Fisher, and the same author, in a series of over 6,000 cases, records 14 per cent that had adenitis We must not infer, however, from the smaller number of complications recorded by us that the cases were less severe than is usual We have already shown that the lethal rate is very close to the average obtained by other investigators on the basis of large exposures over long periods

We are now concerned with the tracing of the 1,063 cases in which the patients survived, and we shall see whether, during the following years, the complications or impairments which they suffered really affected their chances of life to any appreciable degree There were represented, during the entire subsequent period, 3,583 years of life This means that the 1,063 persons were under observation for an average period of 3 4 years The expected number of deaths for this group of survivors was then calculated The mortality rate actually experienced by the company for corresponding age, sex and color during the years covered by the study was used as a standard According to this measure, we had a right to expect 18 6 deaths As a matter of fact we experienced only 18 deaths Far from showing a higher mortality, as was the case in the typhoid fever study, we found a death rate almost identical with the expectation based on our general mortality experience The actual mortality was 97 per cent of the expected We may, therefore, say that during the period covered by our observations the mortality of the survivors as a group shows apparently no increase Table 3 presents a comparison of the actual and expected mortality among the 1,063 survivors, classified by age period

The most favorable condition is found in the age period 2 to 5 years The actual number of deaths is somewhat higher than expected in the age period 6 to 10 (117 per cent) The deaths are considerably higher in the period 11 to 15 (244 per cent) In view of the small number of persons exposed in this age period the figures must not be considered as entirely decisive, although they are suggestive

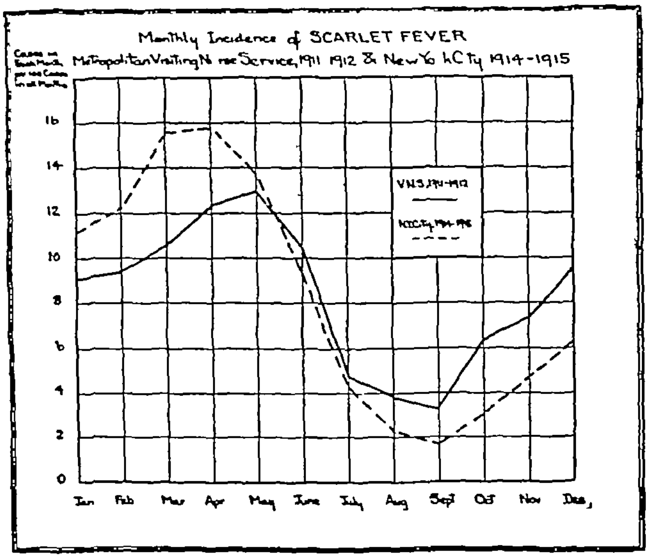
It is of interest to find that, of the eighteen deaths which occurred in the four years, three showed a record of endocarditis on the death certificates, these cases may reflect the impairment resulting from the original scarlet fever There were five deaths from respiratory diseases and four from tuberculosis The remainder were scattered among a number of causes which have no particular interest for us Strangely enough, there were no deaths from kidney diseases Apparently, among the survivors of the primary disease, the kidneys were not sufficiently impaired to cause early death

TABLE 3—COMPARISON OF ACTUAL AND EXPECTED MORTALITY AMONG 1 063 PERSONS IN FIVE YEARS FOLLOWING RECOVERY FROM SCARLET FEVER, CLASSIFIED BY AGE PERIOD

Age Period	Number of Years of Life	Number of Expected Deaths	Number of Actual Deaths	Actual Deaths per 100 Expected
All ages	3,583 40	18 61	18	97
2 to 5	908 29	9 16	7	76
6 to 10	1,614 35	6 00	7	117
11 to 15	699 53	1 64	4	244
16 to 20	194 88	0 62		
21 to 30	105 66	0 67		
31 to 40	60 75	0 52		

We are concerned, therefore, with explaining the difference between the actual experience and that which was expected on the analogy of our typhoid fever investigation A comparison of the two sets of conditions is useful, moreover, because it helps to a clearer insight into the kind of impairment which results from scarlet fever In the typhoid fever cases there was, after recovery, a marked increase in the number of tuberculosis deaths An increase was also noted in the number of deaths from organic diseases of the heart, but this was not so great In our scarlet fever cases, on the other hand, there is no positive evidence of an increase in the number of tuberculosis cases The three deaths from endocarditis are too few to justify any conclusion as to serious heart impairment in the survivors The interesting fact is the absence of deaths from kidney diseases It would seem, then (and this is confirmed by clinicians), either that impairments of the kidneys, which are so common in scarlet fever, are severe enough to cause immediate death, or that in the survivors the injurious effect is not sufficiently great to kill within the next five years Apparently, in the cases in which there was recovery, there has not been enough destruction of kidney tissue to prevent subsequent regeneration It is quite possible, of course, that ultimately there may be an increase in the expected number of deaths from kidney lesions, although such a consequence may not manifest itself until ten or more years have elapsed after the initial incidence of the scarlet fever We hope to clear up this possibility in the future

DEATH RATES FROM SCARLET FEVER



Seasonal distribution of scarlet fever cases.

Although, as I have indicated, the sequelae of scarlet fever are apparently not an appreciable factor in the mortality of survivors, it should not be overlooked that the disease itself still constitutes an important factor in child mortality The disease has not shown the same amount of decrease in frequency during the last fifteen years that has been observed in connection with other infectious diseases The death rate fluctuates about the figure of 10 per 100,000 In 1900 the scarlet fever death rate in the registration area was 10 2, in 1913 the rate was 8 7 In spite of this drop, there were a number of years in the intervening period when the rate was even higher than the 1900 figure Light is cast on the mortality conditions from this cause by the industrial mortality experience of the Metropolitan Life Insurance Company, the figures for which are presented in Table 4 These rates are new and have the particular advantage of accuracy The count is correct not only for the number of deaths from scarlet fever, but also for the number of persons living in the various classes by which the mortality is enumerated We are able to present rates by age, period, sex and color

TABLE 4—MORTALITY EXPERIENCE FROM SCARLET FEVER 1911 1914 3 778 DEATHS CLASSIFIED BY COLOR, BY SEX AND BY AGE PERIOD DEATH RATES PER HUNDRED THOUSAND METROPOLITAN LIFE INSURANCE COMPANY—INDUSTRIAL DEPARTMENT

Age Period	Persons	White Males	White Females	Colored Males	Colored Females
All ages	11 1	13.8	11.2	2 7	2.2
Under 5	64 4	71 1	64 7	17 4	21 9
5 to 9	29 5	27.3	31 0	10.3	7 3
10 to 14	8 0	7.2	9 7	5 3	2 4
15 to 19	3.5	3.8	3 7	0.5	2 2
20 to 24	1.8	1 1	2 9		0 4
25 to 34	0 9	0 7	1.3	0 8	0.2
35 to 44	0.5	0 6	0 5		0 5
45 to 54	0 2	0.2	0 1	0 5	
55 to 64	0 3	0.2	0 8		0 7
65 to 74					
75 and over	0 8		1 4		

The most interesting fact indicated by this table is the markedly lower mortality of the colored Generally speaking, the death rate for colored children is about one fourth that of the whites This fact may serve medical investigators as a point of departure for a study of the etiology of this still obscure disease

TABLE 5—INCIDENCE OF 1 153 SCARLET FEVER CASES, 1911 1912 BY MONTHS

Month of Occurrence	No of Cases	Month of Occurrence	No of Cases
January	105	July	53
February	111	August	45
March	133	September	36
April	141	October	71
May	140	November	82
June	119	December	108

SEASONAL DISTRIBUTION OF SCARLET FEVER CASES

Our study has also made possible a presentation of the seasonal distribution of the 1,153 cases of scarlet fever This distribution is shown in Table 5

From January the frequency of the disease rises rapidly until May, when the maximum number of cases occurs Thereafter there is a rapid drop in the number until September, which is marked by the minimum For the remainder of the year there is a rise in the curve which stops at a point which is slightly higher than that experienced in the previous January

The accompanying chart shows the seasonal distribution of these scarlet fever cases compared with the distribution of 20,984 cases reported by the Department of Health of New York City for the two years 1914-1915 The cases which were reported in each month, per thousand occurring in the entire year, are shown

The two series are clearly similar in their distribution The largest number of deaths occurs, in both, during the months of April and May, and the fewest number in September It is during the summer months that the cases are rarest in their occurrence, and it is quite possible that this condition is correlated with the absence of children from school during the vacation period With the opening of school in September the number of cases begins to increase rapidly, reaching the maximum in the spring Of course, attendance at school is not the only factor, since certain respiratory diseases show a similar seasonal distribution, and are clearly subject to the weather conditions

THE MUNICIPAL HOSPITAL AS A FACTOR IN CLINICAL TEACHING *

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Since the establishment of the first medical school in America, there has been a tacit understanding that the patients in public institutions should be placed at the disposal of medical colleges for clinical instruction While this understanding has been more or less indeterminate and has been, in fact, frequently set aside by public or private action, there has been in the main an admission of the right of medical education in this particular

This right has not infrequently been subject to revision or abrogation by officials temporarily in power, in some cases the exercise of the right has been attended with difficulties, complex in character, and in other cases the right was established or implied by statute For instance, as far back as 1876, the St Louis city charter, adopted that year specifically gave to the medical schools of the city the authority to conduct clinical instruction in the city hospital, but denied it in the Female Hospital, which was at that time a social evil hospital

Until the adoption of the staff plan, six years ago, the St Louis City Hospital was under the direction of a superintendent, often the mayor's personal physician, who was clothed with the business management of the institution, subject, however, to considerable political pressure The superintendent was the sole arbiter of the medical care of the patients of the hospital, unhampered by any interference on the part of politics, which, however, still continued to be impressively concerned with the business side of the institution

The consequence was that each four year period found a new incumbent, generally without business or institutional experience, with an overweaning desire and hope to achieve triumphs in surgical practice when the turn of politics brought forth his successor In a few instances — by accident, let us say — a trained surgeon secured the position, but these were the few hopeful exceptions As to the nonsurgical care of the patients in the early days, it was either ignored or placed entirely in the hands of the interns Later, however, a more or less irregular attendance on the part of a few earnest physicians of the city, without official appointment or without official authority, supplemented the service and improved it to a great extent Later still, the medical service was placed under the charge of one of the assistant superintendents

This type of organization, if so it can be called, offered very little hope for clinical instruction in the municipal institutions of St Louis, and as a consequence the private hospitals of the city were utilized by the better medical schools, the municipal hospitals being either ignored or used only in a perfunctory and certainly in an unsatisfactory manner At one time, there were eight colleges using the city hospital, and as many as eight lectures delivered in one week on one poor patient — without harm to him of course, for he was not examined by the multitudes of eager aspirants for knowledge in the eight different colleges, but he was *looked at* from a distance by eight more or less sleepy crowds and *talked about* by eight professors, who were prepared to lecture on the patient, even if their examination consisted of a few minutes' previous conversation with the intern in charge

Instruction was practically limited to amphitheater talks and discussions by men who had no professional charge of any patients in the hospital, and bedside work was absolutely prohibited

I have given this short sketch of the teaching history of the St Louis City Hospital because, in great measure, it is the history of such institutions in other cities, somewhat modified, it is true, by the local environment and by the reactions consequent on local medical activity

Apart from the futility of appointing an inexperienced man to be both administrator and sole surgical operator in an 800 bed hospital, there existed the stupid provision of changing him every four years for another, who was almost necessarily less trained in hospital administration, if not in operative work

While admitting the doctrine of equality before the law, the appointing power does not and often cannot exercise a proper discrimination between the qualified and the unqualified, owing to the exigencies of political administration and party patronage As a consequence, when, by way of exception, a really good man was made superintendent, it was due either to an unusual ability and foresight of the authorities with a strong regard for justice to the community or to a strange concatenation of circumstances that political sleight of hand sometimes sets in motion

Where the staff plan has been in evidence, the scheme of appointment has been subject to the same objection as in the other plan, for the qualification of the appointees was not the basis of selection except in rare instances, generally the designation of the degree "Doctor of Medicine" satisfied the question of qualification, and political relations determined the appointment But in the last ten years a tremendous change has taken place, brought on perhaps by the drift of medical education and perhaps also by an awakening sense on the part of the profession which has influenced the powers that be in the proper direction

The truth of this is shown in the responses to the following question, which I submitted, among others, to the Class A schools of this country "Have you more control over the material in the municipal hospitals today than you had ten years ago?"

Some of the colleges in the larger communities where there has been no need of the municipal hospital for the purpose of clinical instruction, and institutions such as Tulane, Texas, etc, which have had for years the fullest control over the municipal hospital, note no improvement in this regard This is also true of the colleges in New York which share the material at Bellevue Hospital The answers of the other colleges, however, indicate a tremendous increase of the college influence, and manifest the growing tendency all over the country of the feeling that the best interest of patients in municipal hospitals is conserved and promoted by a closer relation with medical colleges both in treatment and in clinical instruction

About six years ago, the system in vogue in St Louis for many years was changed, and the municipal hospitals were placed under the control of a hospital board and hospital commissioner In place of a single superintendent with both medical and administrative functions, the medical control was vested entirely in a staff of physicians who were appointed by the board and a superintendent was placed in charge of the administration

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* Read before the Association of American Medical Colleges, Chicago, February, 1916

This was a tremendous step in advance, for such attending physicians as were connected with medical colleges had under this new arrangement the necessary control over their patients to use them for clinical instruction if they so desired While, here and there, men were appointed without the proper qualification, a group of men were gathered together eminently fitted for the work Naturally, the college men were in larger number than those not attached, and it was therefore possible to utilize the institution better for clinical purposes than ever before

The new charter adopted in 1914 made the foregoing plan a part of the organic law of the city, except that the director of public welfare was given general direction taking the place of the hospital board, which was abolished, and the hospital commissioner was given full power of appointment

While the latter arrangement was a great improvement over the preceding system, there still remained much to be achieved, more particularly with respect to organization The positions on the staff belonged, as it were, to the attending physicians and not to the colleges, and hence the colleges were obligated for the material to the attending physicians, and were dependent on their good will for clinical instruction, so far as the municipal hospitals were concerned This was, to say the least, not conducive to efficiency or coordination of teaching Furthermore, the appointments were for two years, and therefore there was no assurance that even the best clinical instructor would be continued in office for a longer period This made it impossible either to perfect an efficient organization or to establish a definite policy While enthusiasm and activity of a corps of instructors may make up for deficiency of organization, these good qualities may be in time supplanted by indifference or neglect

To obviate this and to provide a plan of appointment subject to less pressure from friends and political associates, the hospital commissioner (Dr C H Shutt), with the consent of the director of public welfare, accepted a plan which was the result of numerous conferences with the deans of the Washington University and St Louis University medical schools — a plan which could not have been adopted if the representatives of these two institutions and the hospital commissioner had not kept constantly in mind the civic responsibilities brought about by the situation

The plan adopted is as follows The hospital is divided as equally as possible into three units For Unit 1, the appointments are made, without reserve, on nomination of Washington University, for Unit 2, they are made similarly on nomination of St Louis University, and for Unit 3, the hospital commissioner appoints whom he pleases, no instructors in either of the universities being eligible Units 1 and 2 are entirely under the control of the respective universities, and thus it has been possible to establish the rank of appointees which was impossible heretofore Hence it is that in each of these units there is a complete organization in each department, and each clinician's position in the unit is dependent on the university controlling it Furthermore, as a later development, definite members of the resident staff have been attached to the different units, and definite wards have been assigned

While the outside unit cannot possibly effect an organization similar to that of the teaching units, especially in view of the equality of rank and the absence of institutional control of the clinicians, much has been done to establish its efficiency In the assignment of wards, Units 1 and 2 have properly given first selection to Unit 3

The immediate policy of the staff is under the charge of an executive committee composed of two representatives from each unit, and I may say that there has been the utmost harmony in all of its transactions Although the plan has now been in operation for but eighteen months, it has been productive of good results, not only as to clinical teaching, but also in efficiency, which is even more important Without giving the details of this improved order of things, which must be manifest to any one who understands the value of organization, I content myself with mentioning that during the year ending Dec 1, 1914, there were 5,238 visits made by the staff, whereas during the following year under the new plan there were 10,930

It is true, the continuance of this whole plan is dependent on the will of the hospital commissioner and the director of public welfare, but we feel that the value of a consistent organization to the patients of the municipal hospitals will become increasingly manifest, and that the influence of the two universities cooperating in this great civic and educational activity will be potent enough to cause its permanent adoption

This same plan can be adopted in other large centers provided the medical colleges of the highest class work together to the end that public charges in municipal hospitals shall be under the direction of a staff that is appointed on the basis of a definite policy, which comprehends only the highest ideals of medicine, always bearing in mind that provision must be made for the large number of medical men who are not connected with medical colleges, and who possess ideals and qualifications equal to those of the instructors in recognized medical schools

The dean of a certain medical college writes me of his most excellent plan by which, under private arrangement made with the constituted authority, the college makes the appointments He asks me not to mention the name of the institution for fear that, if it were known, the privilege would be lost Without knowing the local conditions, I venture the opinion that publicity in this regard, fortified with the civic and professional validity of such practice, will do more to perpetuate it than the secret understanding, which is likely to be abrogated in time, as the arguments for its continuance have been carefully concealed

In administering the St Louis University unit, we have kept in mind the two important organization requirements, first the patient's welfare and second the student's opportunity We have felt that these could be best achieved by organizing each department on the basis of a head, responsible to the institution, with associates and assistants under his direction As our appointments are not limited to any specified number, except as to the minimum, we can exercise our best judgment as to the personnel

It was soon determined that the organization in prospect required far more of the clinician's time than under the previous plan For this reason, it was found advisable to provide compensation for some of the men in medicine and surgery, at the same time requiring them to spend from three to five hours a day in attendance on patients and in instructing students assigned to work at the City Hospital

At present, three of the attending physicians and three of the attending surgeons are paid, not an extravagant amount, but at least enough to justify them to give the time which the service and instruction require In addition, there are two men in medicine and two in surgery who are not paid Our purpose is to increase the number of men who are paid for part time, and to add men with proper compensation in these two departments who will give their full time to the work At present, no provision has been made for compensation in the specialties, in fact, under our conditions, it is hardly necessary, still, it would not be amiss if full or part pay men were provided in children's diseases, obstetrics and nervous and mental diseases

It is thus seen that our institution is provided with 350 beds in the municipal hospitals, entirely under our charge, with paid instructors in medicine and surgery, with definite assignment of wards under our own members of the resident staff, and with authority to train our students according to the opportunities presented

I would not have it understood that this implies that the condition is absolutely satisfactory or that there are not many difficulties in the way of an ideal accomplishment, but at any rate we are approximating the rational solution of the question

The type of clinical material in municipal hospitals in America has not been altogether the best for teaching purposes, especially in the surgical service The variety is limited, and the stay of patients in the hospital is too short, for few, except those who find it impossible to go elsewhere, apply for admission to the city hospital Why should it be otherwise in an institution which can have no definite policy, which has no consistent organization, and which is administered by men who, whether they are qualified or not, are in the main appointed by those who do not know and cannot know? Why should the people, if they can avoid it, place themselves under the care of physicians whose appointment is not on a qualification basis, and whose tenure of office does not depend on the presence or absence of their efficiency or attention to duty?

How much better is it to hold the universities or medical colleges of the highest class responsible for a definite portion of a hospital, bringing to the institution the influence, the organization and the efficiency which this plan assures, not by concealing its potentiality, but by openly advocating the measure on the well grounded, easily proved claim that it is the best for the people and for the hospital A general adoption of this plan (particularly if the clinicians are paid by the universities) must be followed by an improvement in the character of the clinical material and a more perfect fulfilment of the function of the city in respect to its indigent wards

Under present general conditions there is an economic waste of thousands of patients in municipal hospitals who are lost as material for instruction to students in medicine Add to this the vast amount of funds required by the more fortunately endowed institutions to furnish their students with material for study How much less money would be required and how much more material would be available, if these same institutions could perfect a proper organization of their legitimate share of the municipal hospitals!

Nor may we evade this issue by saying that the municipal hospitals are necesarily a part of the municipal political machine, and therefore unworthy of our concern Our obligation as educators and citizens demands of us that we exert our utmost to the end that these institutions be made to serve their highest functions in medicine and pedagogics

Politics and practical politicians have the greatest regard for the demands of the people, and they listen with keen ears to those who are honestly working for the public good For this reason, cooperation and public propaganda of the good to be accomplished by this plan of organization, efficiency and consistency of policy will be followed by its adoption and continuance, without any opposition or with only the feeblest protest on the part of those who are looking for personal perquisites

The result will be that American medical institutions, like the European, will be able to bring the highest ideals of medicine into municipal hospitals, and to provide their students with what is absolutely essential, if the physician of the future is to be the beneficiary of the best sources of instruction in his profession

A "GROUP STUDY" PLAN FOR A DIAGNOSTIC TEAM ACTING AS A LABORATORY FOR THE PROFESSION *

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Since the idea of pay clinics, group study, diagnostic team work, medical attention to the middle class, and the limitations of physicians have been frequently and openly agitated in the medical journals and the lay press, it is deemed advisable to present for consideration the San Francisco St Luke's Hospital Clinical Club's plan for diagnostic group study in general hospitals This plan provides a type of group consultation for the general practitioner with the aim of preserving the advantages of specialism and eliminating the disadvantages

There are a few private pay clinics in this country where patients may go and be completely examined by a number of specialists At these clinics the majority of cases remain under the care of the doctors of the institution, passing out of the hands of the referring physicians St Luke's Hospital, San Francisco, is the only institution reported to have organized specialists to act as a laboratory for diagnostic purposes, returning the patient after investigation to the referring physician with a protocol of the findings and recommendations for the treatment of the case

Two of Dr Richard C Cabot's articles[1] are of interest in this connection His ideas in the first appear to be sound in theory, but the subsequent discussion of the paper clearly indicates that no definite plan for the solution of the problem was received The second article undoubtedly contains many ideals far in advance of present medical practice, but in it are many things which would have been better unsaid Dr Cabot makes destructive criticism of the profession without balancing it by constructive criti-

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* Read before St. Luke's Hospital Clinical Club, San Francisco, March, 1916

[1] Cabot, R C The Need of Pay Clinics for Persons of Modera Means, Am Hosp Assn, 1915, xvii, 411 Better Doctoring for Less Money, Am Mag, April, 1916, p 7

cism He has sought to teach the laity to distrust the general practitioner, without giving the doctor a concrete plan for the correction of his faults If Dr Cabot will continue his articles on this subject in medical journals and construct a plan whereby group study can be practically carried out by the profession, he will do much toward obtaining better medicine for the masses

This new era in medicine is very young the medical universities are not yet teaching this type of medicine, they have not even accepted it, and in fact, there is no definite instruction to be had on the subject The method of group study now employed in hospitals, by referring the patient from one department to another without joint discussion of cases by the heads of these departments, is open to as severe a criticism as Dr Cabot applied to the methods of the general practitioners But publications on these imperfections which will stimulate the laity to pass laws and regulations on medical matters, before the profession has had an opportunity to study the problems and make recommendations, will prove detrimental to the best interests of progressive medicine

It has not been long realized that the three great classes of patients, the rich, the poor, and the middle class, are receiving quite different medical attention The rich man, while he is able to pay for the services of a large number of high-priced specialists, presumably gets the best medical consideration, but unfortunately the highly paid specialists are individuals who are not organized, and their work is not correlated Consequently, consultations are often perfunctory and unsatisfactory to both physician and patient The pauper, on the other hand, gets the very best that medicine has to offer He goes to the free clinics, where all branches of medicine are represented, and is carefully examined by the various clinicians The individuals of the middle class, constituting about 90 per cent of the sick, are getting the worst medical care They cannot afford to pay large fees for high class specialists, nor will they accept charity They are compelled to accept incomplete examinations, erroneous deductions, and, what follows inappropriate treatment The great mass of the people, however, will not endure this long The solution of the problem will soon be found, and it will come as the result of search from an economical, if not from a humanitarian, standpoint

Dr E V Knapp, our pathologist, has aptly said in an unpublished paper

> Specialization is a necessity depending on human mental limitation If a clinician had a mind sufficiently endowed by nature, and sufficiently cultured by study to be able to appreciate all that is known about anatomy, surgery, pathology and all other divisions of medicine and he also had at his disposal time to make examinations of his patient in each of these branches, he would then have a most comprehensive, correlated clinical picture, but each division of medicine has developed so extensively that it is impossible to ascertain full knowledge of any one Furthermore, no individual could cover all divisions of medicine in all cases even though he had the ability to do so Consequently the general practitioner is no longer able to depend upon himself completely to guide his patient through any obscure illness

Specialism, however, has many disadvantages The specialist often views the cases from his branch of medicine to the exclusion of others The physician who interprets the condition of his patient, partly through written reports of the specialists who have not considered the patient as a whole, will frequently draw false conclusions These reports might be added to or subtracted from, if the specialists had viewed the case from all angles Consultations are also expensive and tend to make doctors employ them only when they seem indicated If group consultations could be a routine procedure, frequently pathologic conditions which are not suspected would be found The great disadvantage of the present day consultations with specialists is that they seldom meet to discuss their findings, and the case is rarely reexamined in the light of new evidence, remaining hazy and incomplete

Realizing their limitations and the disadvantages of the present day consultations, the profession in this vicinity, nearly three years ago, organized the San Francisco St Luke's Hospital Clinical Club for the purpose of remedying such conditions There were no guides and no landmarks, and a new trail had to be blazed It was decided to meet once a week to discuss cases, work them over, and try various plans of study Cases were studied single handed, in groups, by recommendations, by referring to specialists, and in every conceivable way, until at last "group study" was decided on as a partial solution of the difficulties Here is an outline of the method used

A diagnostic section was organized out of the San Francisco St Luke's Hospital Clinical Club This section consists of ten men, each having special training along some particular line The members of the profession refer obscure cases to this section for diagnosis These patients are placed in the hospital for observation, and each member of the diagnostic team makes an individual examination and a written report of his findings At noon each day the team meets to discuss the cases If the case is not clear at the first consultation, further investigation is recommended, and any new discoveries are reported the following day This method of procedure is continued day after day until some conclusion is reached The physician who referred the case is asked to be present at all of these consultations Finally, the patient is referred back and a written report of the findings and recommendations for treatment are mailed to the attending physician Thus the specialists make of themselves a diagnostic laboratory

All of this work is being done by the diagnostic team for a fee commensurate with the patient's income The amount collected is not sufficient to pay for the time of the clinicians However, the good that is being accomplished by this method of study and the educational returns for each member of the team in daily discussion with his colleagues amply repays the clinicians

In our experience the success of a plan of this kind depends briefly on the following conditions The diagnostic team must accept, from the profession, cases for investigation at a price consistent with the income of the patient, cases should be examined by all the members of the team, the results of their findings must be written, the specialists meet in daily consultation over the cases, and investigations continue until all possible evidence is discovered The case is returned to the physician who sent it and a report is mailed, together with the conclusions and suggestions for treatment

The results to be expected from such a scheme are these The general practitioner will gladly accept it the good influence of the family physician will be preserved, medical men in the community will take advantage of the daily discussions and gradually broaden their point of view of medicine, this method of group study will maintain the advantages of specialism and do away with the disadvantages Clinical reports from this work bearing on these predictions are now being prepared for publication

It may be said that the type of group study as now practiced in general hospitals is unsatisfactory The assignment of cases to departments for treatment is often determined by the patient's complaint without previous investigation by the various departments, which is comparable only to the methods employed by the general practitioner Group study to be profitable must not only provide for the treatment of the complaint which causes the patient to seek advice but also aim at the discovery of hidden departures from the normal in order that proper therapeutic and prophylactic measures may be recommended to the end that the individual's future health may be conserved

St Luke's Hospital

THE TREATMENT OF INTERNAL HEMORRHOIDS, BLEEDING SPOTS AND VILLOUS TUMORS OF THE RECTUM BY THE HIGH FREQUENCY CAUTERY *

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No matter what the argument, there will always be a number of people who will balk at the word "operation" In the palliative treatment of hemorrhoids the best that can be expected is relief, as the name implies, and the degree of this palliation is speculative If the piles are of the external variety, whether the tumors are inflamed or not, the subcutaneous injection of a 2 per cent solution of cocain, alypin or other local anesthetic, followed by excision and the loose horsehair suture of the edges of the wound, will give good results, and the patient scarcely realizes he has had an operation

In the treatment of the internal variety the quacks have always been popular, in that they risk infection, abscess and other dangers when they inject their patients with phenol (carbolic acid) solution There is no doubt that they have cured some patients, but it is equally true that they have produced intense suffering, and in many cases their treatment has led to fistula I recall one case in particular of a patient who, after injection for hemorrhoids, developed a fistula with an opening larger than the index finger Strange to say, the quack "got away with it" However, the lucky patient, who escapes the dangers mentioned, and obtains a cure without the dreaded operation, forgets his suffering and sings the praises of the one who cured him I am not decrying the radical operation for hemorrhoids Excision and suture quickly disposes of these tumors But for the patient who cannot or will not take an anesthetic the method I describe will efficiently, though slowly, give a radical result, and the patient need lose no time from his work

Several years ago Beer of New York described a method of removing villous tumors, or papillomas, of the bladder by the use of the high frequency current of Oudin, that is, the single pole current, and cited cases Later, he published case reports of other operators, among which he included some of my work This method is now a recognized mode of treatment for these tumors About two years ago I tried this method in the treatment of a case of bleeding from a nevus growth in the rectum The usual treatment of this condition has been the application of pure nitric acid by means of a glass rod, with the possibility that the acid might not limit itself to the growth The result of the application of the high frequency current was excellent This success led me to try it in a case of internal hemorrhoids My patient was a man who was willing to try anything except an operation He had one tumor larger than a pecan and several small ones It took ten treatments covering three months (Less than half that time would now be necessary) The cure was radical and the man did not lose a day from his office This was in September, 1914 Since then I have operated on quite a number of other patients with internal hemorrhoids, in many of whom bleeding was the chief symptom

In this work I use the Wappler portable transformer, with Krafft spark gap, and the 110 volt alternating current This current, stepped up on the rheostat to number 3 or 4 and a very narrow gap, gives a very hot spark at the aluminum electrode, which quickly sears the flesh, with the odor of burning meat A foot switch is convenient, but not absolutely essential An electrode of $\frac{3}{32}$ inch aluminum rod set in a hard rubber handle and bent to an angle of 135 degrees with the handle, and covered with thick-walled rubber tube, can easily be procured This electrode is about 4 inches long, and to make a large burning surface a small shepherd's crook should be made on the end One can readily try out its cauterizing effect on callus found on nearly every doctor's hand since the advent of the automobile With the patient in the knee-elbow position and sway-backed, a toothpick around which is wound absorbent cotton, making an applicator $\frac{1}{4}$ by $1\frac{1}{2}$ inches, is soaked in a 4 per cent solution of any of the previously mentioned local anesthetics and pushed into the anus, being allowed to remain there for about ten minutes, while the apparatus is made ready The anal tube or speculum is now introduced, the light attached, the anus wiped out if necessary and the electrode applied (I use a Martin's anal tube, to which is attached my own lamp arrangement, although even a head mirror may be used)

The application of the electrode differs from that of the electrocautery The electrocautery is applied to tissue after it becomes red, but with the high frequency electrode the cauterization is accomplished in the gap or arc between the electrode and the tissues The electrode is of aluminum and does not even become discolored It is applied to the tumor and then carefully withdrawn until its highest efficiency is secured, as determined by the eschar and smoke One tumor is thoroughly burned longitudinally with the axis of the bowel When this tumor has become black, another is given a light dose, that is, one tumor is burned quite energetically and one or two lightly at a sitting, and then the burned area is painted with liquid petrolatum, or, as I prefer, with oil of eucalyptus, 1 in 8 of the oil, and no further treatment of the parts is given for two weeks, or until the sloughs have come away and the parts are clean There is little or no pain ten

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* From the Surgical Department, South Side Hospital

minutes after a treatment, and the local anesthetic lasts that long One can hardly believe the statement that the pain of the high frequency burn is so transient, but the burn is severe for a few minutes unless anesthesia is secured

Having used this method of treatment for several years in the removal of bladder tumors and for nearly two years in the treatment of rectal hemorrhages and tumors, I cannot speak too highly of the results

6126 Jenkins Arcade Building

ACUTE PELVIC APPENDICITIS

WITH CASES IN POINT

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ST LOUIS

An acutely infected appendix is the most frequent and one of the most serious acute abdominal lesions demanding surgical attention The laity is not alone responsible for the present-day mortality being higher than it should be, this is due in part, I think, to the frequency with which the appendix lies in the pelvis, thereby changing the classic picture of acute appendicitis so materially that we do not always recognize the source of the symptoms sufficiently early to avoid disaster

We all know how deceptive may be the symptoms in acute simple appendicitis When the appendix lies in the pelvis the picture may be even more deceptive, since the clinical manifestations are largely dependent on (1) the site of the appendix, (2) the severity and duration of the infection, (3) the presence or absence of adhesions, (4) the state of health of adjacent organs, and (5) the character of the treatment The cases herein reported emphasize these facts

Pain is invariably a prominent symptom It differs from the classic in being situated lower in the abdomen and more diffuse in character, in many cases it is referred to adjacent organs The absence of localized pain at McBurney's point is one of the most frequent causes of our failure to recognize the disease In many cases the pain will be most severe just above and to either the right or left of the pubes In several of my cases it was referred to the bladder, while in others the patient complained of persistent severe pain in the epigastrium Sudden cessation of severe pain may signify perforation, in any case it does not necessarily mean improvement

Abdominal rigidity is nearly always present, but the impressive feature in these cases is the finding that both recti are rigid, the rigidity is not limited to the right rectus, although it usually is more rigid than the left because the site of inflammation is usually to the right The left rectus may, however, be more rigid than the right This is a frequent cause of confusion in making a diagnosis in these cases

The characteristic point tenderness midway between the umbilicus and the anterior superior spine of the ileum, as described by McBurney, is absent because the field of action has shifted to the pelvis This finding is quite misleading unless the practitioner recalls that the appendix frequently lies in the pelvis Pressure made over McBurney's point may not cause any pain whatsoever, pressure over a corresponding point on the left may incite severe pain Rectal examination may show an inflammatory mass in the pelvis

Vomiting is usually not a persistent symptom When the inflammatory process is advancing upward it may be more or less constant It usually follows the initial pain of onset, but may precede the pain If the appendix becomes adherent to coils of small intestines causing ileus, vomiting becomes a very prominent and persistent symptom

Flexion of the right leg is usually absent in cases of acute pelvic appendicitis The reason is obvious Late in the disease, however, both limbs will be found flexed

The pulse, temperature and blood findings do not differ from those observed in classic cases

The diagnosis of acute pelvic appendicitis requires a careful consideration of the previous history, the mode of onset of the present attack and the shifting of the symptoms from the epigastric to the hypogastric and inguinal regions instead of to midway between the right anterior superior spine of the ileum and umbilicus, the physical findings will eliminate primary involvement of the adjacent pelvic organs The mere fact that the symptoms began as an appendicitis and the picture still resembles the clinical manifestations of a diseased appendix, although the characteristic McBurney point tenderness, etc, are absent, should lead us to make a provisional diagnosis of acute pelvic appendicitis This is especially true if examination then shows absence of disease of the adjacent pelvic organs, an immediate operation is called for It is not necessary to have the classic picture of appendicitis to make a diagnosis of appendicitis The preponderance of the symptoms, and the fact that the patient is suffering from some acute pelvic lesion which is not due to an acute pus tube, should warrant immediate attention We all know that when the appendix is adherent to the bladder or to the peritoneum overlying the ureter, the patient will often complain of bladder symptoms and the urine may contain blood and pus (Cases 1 and 4) We also know that the appendix may become adherent to the rectum or ovary, or possibly to an infected tube, thus causing symptoms of acute infection in the respective organ

In any case the clinical manifestations indicate clearly an acute abdominal lesion demanding early attention If in doubt as to the diagnosis, the physician should place the patient in Fowler's posture, administer saline proctoclysis according to Murphy's method, and withhold all purgatives, food and opiates Purgatives only increase peristalsis and the possibility of perforation An enema is preferable If the symptoms persist at the end of six hours, a consultation should be held

The treatment of acute pelvic appendicitis does not need comment We all know that immediate operation saves practically every case of appendicitis The contention that we should wait until the inflammatory process becomes localized is simply preposterous, Murphy has shown how erroneous is this thought Morphin administered before operation kills many patients I do not think it necessary for the practitioner to make an accurate diagnosis before he recommends operation in these patients presenting the clinical picture of an acute abdominal condition We really best serve the patient by calling surgical consultation in these cases before the distended abdomen, the persistent, agonizing pain, the high temperature, the vomiting, the rapid pulse and the anxious expression tell the tale of too much "watchful waiting"

CASES IN POINT

A brief report of a few of the recent cases will suffice to impress the picture in these cases of acute pelvic appendicitis

Case 1—*History*—A R, white man, aged 30, gave a history of previous attacks of pain in umbilical region, nausea, pressing desire to urinate, followed by vomiting, severe pain just above pubes and passing of bloody urine The present attack began twenty-four hours ago with sudden severe pain in umbilical region followed by nausea, vomiting and shifting of the pain to just above the pubes Dr Westrup found patient suffering intensely, both recti were intensely rigid, pressure over lower abdomen incited desire to urinate even though the patient had been catheterized, pulse 90, temperature 100 On the following morning the symptoms had somewhat subsided Dr Westrup diagnosed case as one of appendicitis

Examination—When I saw patient twenty-four hours after onset the abdomen was soft, but pressure near insertion of the right rectus muscle caused considerable pain and a desire to urinate, no tenderness at McBurney's point, temperature 99 pulse 80, and symptoms subsiding, leukocyte count 14,000 Small mass found on rectal examination

Operation—Patient felt so well on the following day that he wanted to go home but finally consented to operation The appendix was found gangrenous and partially surrounded by omentum and adherent to the right posterior surface of the bladder

Case 2—*History*—O H, white girl, aged 13, was suddenly seized with chill and fever followed by severe pain in umbilical region and vomiting three days prior to consulting Dr Washington, the usual home remedies had been given without avail, her menstrual period was due and she thought her trouble was possibly due to this

Examination—Dr Washington found pulse 120, temperature 104, abdomen distended and very rigid, there was no point tenderness in area described by McBurney, in fact, pressure over left rectus induced more pain than pressure over McBurney's point, bowels had moved but the pain was so severe and paroxysmal in character that patient complained a great deal I saw the patient a few hours later and was impressed by the absence of pain at McBurney's point, the diffuse character of the pain and its location just above the pubes, also by the diffuse rigidity and high temperature and pulse rate Patient was sent to the hospital, where a blood count showed leukocyte count of 18,000

Operation—Median incision confirmed Dr Washington's diagnosis, the appendix was gangrenous and lying low down in the pelvis, numerous coils of distended small intestine were found glued together by fibrin

Case 3—*History*—A F, white woman, aged 26, had been complaining for two days of discomfort just above pubes, the pain was not constant or severe, but the usual home remedies had not brought relief Patient had vomited once, bowels had acted and she walked to the bath room without discomfort Dr Bewig saw the patient a few hours before I did, he found pulse 78 and temperature 100 The abdomen seemed slightly distended, but patient insisted that such was not the case, both recti were flaccid, deep pressure above the pubes caused pain, whereas pressure over McBurney's point was negative

Operation—Two days later the patient consented to operation because the pain had persisted and she was afraid of appendicitis Median incision showed a swollen, slightly gangrenous appendix lying low down in the pelvis, there were no adhesions

Case 4—*History*—M G, white man, aged 32, gave history of previous attacks, and had been told that he had appendicitis The present attack began thirty-six hours before with severe pain in lower abdomen, pain became more or less constant, vomiting frequent

Examination—Expression was somewhat anxious, abdomen distended, both recti intensely rigid, tenderness over greater part of lower abdomen, rectal examination negative, pulse 110, temperature 102, leukocyte count 18 000, urine contained pus and casts

Operation—Immediate operation revealed swollen gangrenous appendix lying behind and to the right of the bladder, the omentum was adherent to base of appendix and bladder

Case 5—*History*—H H, white man, aged 21, had been sick three days Illness began with cramplike pains in lower abdomen followed by nausea Purgative had been given but bowels had not acted The fact that examination did not show rigidity of right rectus and McBurney point tenderness confused the medical attendant Patient entered hospital with a diagnosis of intestinal obstruction

Examination—Expression was very anxious, abdomen greatly distended, legs flexed, pulse 130, temperature 101, leukocyte count 16,000, mass in pelvis, both recti intensely rigid, patient presented usual picture of advanced peritonitis

Operation—A gangrenous perforated appendix was found lying in pelvis, intestines intensely congested and of a mahogany color, parietal peritoneum intensely congested, the pelvis was filled with pus

COMMENT

Numerous additional cases would only tell the same story We must not expect the classic picture in these pelvic cases I am confident that the mere dissemination of the knowledge that it is possible to have appendicitis without the classic McBurney point tenderness, right rectus rigidity, etc, and that the appendix frequently lies in the pelvis and may cause left sided pain and left rectus rigidity, etc, will be the most potent factor in bringing these cases of acute pelvic appendicitis to surgical attention sufficiently early to enable us to reduce the mortality to the minimum

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CIRCUMSCRIBED PURULENT LEPTOMENINGITIS DUE TO FRONTAL SINUSITIS

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Circumscribed leptomeningitis of rhinogenous origin has been rarely noted by the neurologist, and only in the last decade or so by the rhinologist The literature on intracranial, oculo-orbital and cerebral complications secondary to disease of the accessory sinuses of the nose has become so extensive that more recent writers have concerned themselves with complications arising from individual sinuses

Purulent leptomeningitis from frontal sinusitis may occur with or without brain abscess, it may be in association with pachymeningitis or with an extradural abscess

The seat of the lesion is chiefly on the convexity of one or both frontal lobes, with varying involvement of other portions of the brain The symptomatology is that of sinus disease with accompanying meningitis Three forms may be distinguished, a sudden apoplectic, quickly terminating, a slow, insidious, protracted type, and an intermittent form, with long interval before the meningitic attack

Case 1 illustrates the sudden onset of meningitis, after a period of intermittent sinus trouble

CASE REPORTS

Case 1—R K, errand boy, aged 14, was seen by Dr G on Nov 20, 1914 The boy was suffering with pain in the head, the right eye was swollen and there was pain over the right orbit

He gave a history of repeated head colds In the latter part of September 1914, he developed a severe head and chest cold, which continued for two weeks and was accompanied by profuse purulent discharge from the nose

On November 14 he contracted fresh head cold, and on the next day he complained of pain shooting through the head, eyes and teeth The following day there was swelling around the right eye and slight exophthalmos

At the time of the patient's first visit he complained of pain over the right frontal sinus region, intense frontal headache, and there was closure of the right eyelid, with some bulging of the eyeball

Examination of the right frontal sinus showed pus A portion of the middle turbinate was removed and considerable pus drained away On Saturday he was examined again His symptoms had improved, but protrusion of the eye was still marked The swelling over the right orbital ridge was incised, but no pus was found The next day he developed severe headache over the frontal and occipital regions and a deeper incision over the frontal sinus released considerable pus

Several days later he developed paralysis of the opposite side of the body, of the leg chiefly The temperature became from 102 to 104, pulse of from 90 to 100 A Killian operation was performed There was a great quantity of pus, and the septum between the sinuses was found necrosed, so the sinuses were entered and cleansed The temperature dropped to normal and the patient felt much better For two days his condition was good The next day his temperature rose suddenly, he became stuporous, and his pulse became rapid and weak.

I first saw the patient the afternoon of the day he died He was stuporous, showed paralysis of the left leg and partial paralysis of the left arm He had ankle clonus and the Babinski sign, with rigidity of neck.

A diagnosis of circumscribed purulent leptomeningitis was made but operation was not advised, owing to the moribund condition of the patient He died two hours later

Necropsy—On opening the cranial cavity the dura was found smooth and glistening, but bulging. On opening the dura, a purulent exudate was found over the right frontal lobe, extending as far as the postcentral gyrus A small exudate was noted over the right temporal lobe and over the superior surface of the cerebellum The pus had also escaped into the right middle fossa The anterior and posterior fossae were free The frontal sinus was free of pus, but showed a thick clot of blood and some granulation tissue The diploic veins were markedly congested The longitudinal sinus was filled with pus The roof of the orbit showed necrotic bone, and there was pus in the orbit The right anterior and posterior ethmoid sinuses, as well as the sphenoid sinus showed normal mucous membranes

Pathologic Summary—The pathologic findings revealed a purulent leptomeningitis, limited chiefly to the right frontal lobe, extending as far as the central gyri There was some basal meningitis and a small exudate on the superior surface of the cerebellum The longitudinal sinus was filled with pus Necrotic bone was found in the orbital roof at the juncture with the ethmoid

Case 2 illustrates sudden onset without showing any localizing symptoms, death occurring within a few days I had the opportunity of studying only the brain The clinical notes were obtained from the hospital record

The patient, a young woman of 22, was taken ill with cold in the head, severe headache, some nausea and vomiting There was no record in the history referring to nasal trouble On admission to the hospital her condition was that of semistupor, alternating with delirium The pupils were equal and reacted to light and in accommodation There was some rigidity of the neck, and the knee jerks on both sides were exaggerated Kernig was obtained on the right side The Babinski sign was absent on each side Lumbar puncture showed cloudy cerebrospinal fluid polymorphonuclear cells 89 per cent lymphocytes 10 per cent No tubercle bacilli or meningococci were found Patient could be made to talk but remained usually in semistupor The pulse was from 100 to 140, and the temperature varied between 100 and 103 Death occurred in five days

Necropsy —On opening the skull, the dura was found smooth and free from adhesions The veins were congested Removal of the dura showed a thin, purulent exudate over the convexity of both frontal lobes, reaching as low posteriorly as the central convolutions, and extending laterally to the sylvian fissure on each side The remaining surface of the brain as well as the base, was free from exudate Examination of the frontal sinuses revealed a congestion of the mucous membrane, but no free pus There was some exudate over the cribriform plate of the ethmoid, and the longitudinal sinus was distended with blood

Diagnosis—Influenzal meningitis following frontal sinusitis and ethmoiditis

Pathologic Summary —Purulent leptomeningitis, confined chiefly to the convexity of both frontal lobes, frontal sinusitis, and ethmoiditis

These two cases, as well as a study of the literature, show that the symptoms, as revealed in Case 1, are frequently preceded by weeks, or even months of nasal catarrh, with frontal headache, or, as in Case 2, they may occur after only a few days, following an attack of influenza The edema and discoloration of the eyelid, with tenderness over the orbit, as in Case 1, frequently precede the cerebral symptoms when disease of the wall of the sinus or orbit is present The frontal headache is present in nearly all cases, though pain in the head is not limited to that region The pulse and temperature are not characteristic Rigidity of neck and Kernig's sign, though noted in both my cases, are not frequent symptoms Paralytic symptoms are noted usually in a later stage of the disease Irritability and restlessness, alternating with clouding of the sensorium, are sometimes the only meningitic symptoms present, and death sometimes comes, as in Case 2, before the development of paralytic symptoms

The pure meningitis following frontal sinus disease is less frequent than brain abscess, but much more frequent than thrombophlebitis This is analogous to Korner's statistics on otitic meningitis In 140 cases analyzed by Gerber, there were sixty-five cases of brain abscess, to fifty-one of meningitis

The explanation of this phenomenon depends on the route of infection, which may be direct, through the interstices or necrotic walls, or indirect, through the venae perforantes of the sinus and orbit, or through the lymphatics According to Gerber, the most frequent route in the production of leptomeningitis is through disease of the dura, following disease of the posterior wall of the sinus Disease of the anterior wall, with thrombosis of the longitudinal sinus, may produce it indirectly, and disease of the inferior wall, with necrosis of the orbital roof and thrombophlebitis of the veins, may also indirectly produce leptomeningitis It is possible that the lymph channels may play as important a part as the diseased walls and veins Zwillinger, in some recent experiments on animals, has investigated the relation of the perimeningeal lymph spaces — the subdural and the subarachnoid — with the lymph vascular nests of the frontal sinus, and has shown that a direct connection exists This may explain the route of infection in Case 2, as well as in many others reported, in which the route was not clearly demonstrated. Logan Turner thinks that they play a subordinate role, for the operating table and necropsies have shown the infection spread as the result of caries of the contiguous bone

There have been few cases reported in which operation led to recovery Gerber found three out of fifty-one cases of meningitis, those of Herzfeld, Piffl and

Luc To this we would add the case of Spiller, Shields and Martin, reported in 1908 This case, not noted in the reports of Gerber and Onodi, was the first case with recovery reported in America The recovery in this case was supposed to be due to exposure of the diseased area to the air, but recent studies in experimental meningitis, by Kopetzky and Haynes, show that relief of intracranial pressure can cause recovery

It seems that in many cases the dura escapes involvement, that incision is necessary in all cases in which absence of lesions on the surface is noted This holds true, not only for the meningitic cases, but also for the subdural and frontal lobe abscesses

The failure of recovery in most of these cases may be traced to several factors — the virulence of the infection, frequently streptococcic, with rapid termination of the case in several days (cases of Mahu, Wertheim and others), the absence of meningitic symptoms (cases of Blessig-Tiling, Lendentu and others), the failure to recognize the underlying process sufficiently early, and finally, the presence of an apparently normal dura, preventing further operation

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FREE TUMOR DIAGNOSIS AS A FUNCTION OF STATE PUBLIC HEALTH LABORATORIES *

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This study and report is based on a survey of the various states in regard to the existing facilities for the laboratory examination of specimens of suspected cancerous tissue Through the agency of this report, it is the intention of the American Society for the Control of Cancer to consider the need for a general extension of such facilities under public auspices, and the means by which it may be accomplished

METHODS OF INVESTIGATION

To obtain information as to what is being done in the different states at the present time, a questionnaire was sent to the directors of the various state public health or hygienic laboratories, and in some instances to the secretaries of the state boards of health Answers to the following questions have been received from all of the forty-eight states

1 Do you make pathologic diagnosis of tumor tissue in your state public health laboratory, or in any other state institution?

2 If these examinations are made, is the work done free of charge, or what is the amount of special fee asked for same?

3 Do you believe that such work should be done free of charge, either by state public health laboratories or other institutions in each state, as an important aid in the campaign against cancer?

In order to determine the value of free tumor diagnoses made by a state public health laboratory from the standpoint of the practicing physician and surgeon, a second questionnaire was sent to a large number of North Dakota doctors The free diagnosis of tissues by the public health laboratory is required by law in that state, and has been carried on for nine years The following questions were asked

1 Do you send your suspected tumor specimens to the state public health laboratory for diagnosis?

2 If not, who makes your pathologic diagnoses?

3 Do you believe the average practitioner is prepared to make accurate microscopic diagnosis of cancer?

4 Do you think that early diagnosis is an important step in the prevention and cure of cancer?

5 Have the tumor diagnoses of the state laboratory been satisfactory in the past?

6 Do you believe that the doing of such work, free of charge, is of value as a public health measure in helping to control cancer?

RESULTS OF INVESTIGATION

Present Facilities for Pathologic Examinations in State Laboratories —Of the forty-eight states, twenty-four have facilities for the diagnosis of suspected cancerous tissue either in their state public health laboratory or in some other state institution, while twenty-four do not attempt such work Table 1 gives the names of such states

TABLE 1 —FACILITIES FOR TUMOR DIAGNOSES IN PUBLIC LABORATORIES

States Which Have Facilities	States Which Do Not Have Facilities
North Dakota, Wisconsin, Indiana, Minnesota, South Dakota, Mississippi, Iowa, Florida, Alabama, Arkansas, Pennsylvania, New Hampshire, New York, Missouri, Michigan North Carolina, Rhode Island, West Virginia, Kansas, Louisiana, Vermont, Delaware, Texas, Oklahoma Total, 24	Nebraska, Illinois, Virginia, Connecticut, Oregon, Colorado, Montana, Massachusetts, Washington, Idaho Maine, Ohio, Nevada, Maryland California, South Carolina, New Jersey, Georgia, Kentucky, Utah, Wyoming, Tennessee Arizona New Mexico Total, 24

Of the twenty-four states which have facilities for such work, nineteen carry on the work in their public health or hygienic laboratories, while five do the work in their state university laboratories of pathology or preventive medicine Table 2 gives the names of such states

TABLE 2 —METHOD OF MAKING TUMOR DIAGNOSES

States in Which They Are Made in State Public Health or Hygienic Laboratories	States in Which They are Made in State University Laboratories
North Dakota, South Dakota, Kansas, Vermont, Louisiana, Michigan, Indiana, Wisconsin, Mississippi Florida, Alabama, Pennsylvania, New Hampshire, New York, North Carolina, West Virginia Rhode Island, Delaware, Oklahoma Total, 19	Iowa, Minnesota, Arkansas, Missouri, Texas Total, 5

Of the twenty-four states which have the facilities mentioned above for making tumor diagnoses, five charge specified fees, six charge all persons except indigents, and thirteen make no charge in any case Table 3 gives the names of such states

Value of Free Tumor Diagnosis as an Aid in the Campaign Against Cancer —General Opinions of State Authorities From information available, it seems that opinions of authorities differ somewhat as to whether or not tumor diagnoses should be made free of charge either by state public health laboratories or other state institutions, as an important aid in the campaign against cancer Table 4 gives the ideas of the various state authorities on this point, showing that more are in favor than against the plan, in all instances these are the personal opinions either of the director of the laboratory or of the executive officer of the state board of health

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* Report of a committee (consisting of Dr F C Wood, Columbia University, Dr James Ewing, Cornell University, and Dr L D Bristol, chairman, University of North Dakota) appointed by the American Society for the Control of Cancer

TABLE 3—CHARGES FOR MAKING DIAGNOSES

States Charging Special Fees for Tumor Diagnoses	States Charging Fees for All Except Indigents	States Charging No Fees for Tumor Diagnoses
West Virginia, New Hampshire South Dakota ($3), Wisconsin ($5), Michigan (free if specimen is sent by health officer) Total, 5	North Carolina ($5), Arkansas ($5) Alabama ($5) Indiana, Vermont ($2) Texas Total, 6	North Dakota Rhode Island, Missouri New York Pennsylvania Florida, Mississippi Iowa (if gross specimen is sent for teaching purposes), Minnesota, Louisiana (work done only for indigents) Kansas (work done only for indigents), Delaware, Oklahoma Total, 13

TABLE 4—OPINIONS AS TO VALUE OF FREE DIAGNOSES

States Approving the Plan of Free Tumor Diagnoses as an Aid Against Cancer	States Not Approving the Plan of Free Tumor Diagnoses as an Aid Against Cancer	States Giving No Opinion
North Dakota Kentucky Rhode Island, Missouri Maine, New York Idaho Washington Montana, Colorado, Pennsylvania Connecticut, Florida Illinois Mississippi Delaware Tennessee Indiana Michigan Louisiana (for indigents), Utah Vermont, Kansas Texas Arizona Oklahoma Total, 26	Iowa Georgia New Jersey, South Carolina California West Virginia Maryland Nevada Ohio Massachusetts, Oregon Arkansas, Alabama Virginia, Nebraska, Wisconsin Minnesota South Dakota Total, 18	North Carolina New Hampshire, Wyoming New Mexico Total, 4

The chief arguments received from the sources named above against the free diagnosis of tumor tissue in state laboratories are as follows

1 "Diagnosis of tissue for cancer is merely a private consultation and is not regarded as public health work"

2 "The plan would savor too much of state medicine"

3 "As a rule the appropriation for the state laboratory does not warrant the doing of more work, and tumor diagnosis should not interfere with the diagnosis of the so-called communicable diseases"

4 "There is danger of spreading cancer cells into other parts of the body by the excision of small specimens for diagnosis"

The arguments in favor of the free diagnosis of tumor tissue as an aid in the campaign against cancer may be summarized as answers to the foregoing four objections

1 Surgeon Carroll Fox of the U S Public Health Service says, in regard to the diagnosis of tissues for the presence of malignancy by state public health laboratories 'Such work is the legitimate work of the health department The ultimate object of all health officers is to prolong life, and to secure this result in the case of cancer, an early diagnosis is necessary It is, therefore, only right that the health officer, through his diagnostic laboratory, should lend all the assistance possible" This also is the opinion of a large number of other authorities who look on cancer as a public "menace" to be attacked by public officers, with public money

2 From the foregoing point of view, if it is the duty of the health officer to prevent premature death from all causes, it is as much his duty to prevent death from cancer as from tuberculosis For this reason, facilities for the diagnosis of suspected cancerous tissue should be offered free of charge in a state laboratory, just as facilities are offered for free sputum examinations without the cry of "state medicine" being raised

3 It is to be conceded that tumor diagnoses should not interfere with the work more strictly related to the communicable diseases, and the latter should always have priority Furthermore, it is not to be expected that such pathologic work can be carried on without sufficient appropriation to warrant it This is not an argument against free tumor diagnosis in public health laboratories, but is simply an indication that the people of the state should be educated to the point where they will be willing to appropriate more money to cover this extra work

4 It must be admitted that there is some chance that by cutting through healthy tissue into a malignant tumor, for the purpose of obtaining a specimen, metastases may be more rapidly spread But in a large percentage of cases the advantage gained by a microscopic diagnosis is very much greater than the risk of spreading the disease by its proper removal for such a purpose On this point Sondern has briefly stated the conservative opinion of a committee of the American Society for the Control of Cancer

> In the removal of tumor tissue for diagnosis, the advantage of such microscopic examination, as well as the danger of aggravating the disease by this procedure, must be considered In many cases the advantage of diagnosis outweighs the danger of removal of tissue for this purpose, and the procedure is justified in the opinion of the majority The necessity for this may be determined by the skill of the clinician Opposed to the procedure in general is the danger of aggravating the condition by the excision, and this varies according to the nature and the position of the growth To cut through the skin into a malignant tumor of the breast in order to remove a piece for examination is generally discountenanced Errors in diagnosis result from the excision of inflammatory tissue on the margin of a tumor when the section does not include tumor tissue, this being most frequent in the breast and prostate Incisions into actively growing, deep-seated malignant tumors should be avoided, as this may disseminate infection through the vessels, may permit extension or accelerate growth by relief of capsular tension There is little danger, however, from the proper removal of tissue from any superficial growth of the skin or mucous membrane Crushing or kneading malignant tissue should be carefully avoided under all circumstances

Admitting the foregoing statements, and giving wide publicity to them does not argue against the doing of such diagnostic work in public laboratories as an aid in the campaign against cancer It simply means that physicians and surgeons should use judgment as to the specimens which they wish to remove for diagnosis

We do not desire to argue against the value of frozen section work, or against any physician making his own pathologic diagnosis *if he is qualified to do such work*, any more than we would argue against his making bacteriologic diagnosis of sputum or throat cultures if he has had sufficient training to be accurate

Other points have been raised by various authorities in support of the value of tumor diagnosis in public health laboratories, the most important of which are

"It would tend to raise the general tone of surgical practice among men who have no hospital or laboratory affiliation"

"It would tend toward the diversion of material from strictly commercial laboratories, some of which are known to be grossly incompetent from the standpoint of their pathologic work "

Even to educate the public and the profession to *demand* a confirmation of a clinical diagnosis by a microscopic finding after operation would be of inestimable value in the recording of accurate vital statistics relating to cancer, in assisting the physician or surgeon to make reliable clinical diagnoses in the future, and in protecting the public from cancer quacks who always shun the microscope It is difficult to collect a fee for a pathologic diagnosis after an operation has been performed, hence the value to the public and the profession at large by the doing of such work free of charge in public health laboratories If clinical diagnoses were thus improved and cancer quacks were thus eliminated, the death rate from cancer would fall Furthermore, if accurate mortality statistics are of value in combating all diseases (including cancer), and if the state health department is chiefly responsible for gathering such statistics, it would seem that it might be of great value even for the state to *require* the sending in of pathologic specimens from all persons dying of suspected, or clinically diagnosed, malignant disease It is obvious that such required work would have to be done free of charge by state laboratories under the direction of competent pathologists

Opinions of Physicians in One State in Which the Plan of Free Tumor Diagnosis Has Been Carried on for Nine Years As a final argument in favor of our report, it may be of interest to give a few facts concerning the working of this plan of free tumor diagnosis in the public health laboratory of the state of North Dakota during the nine years since the laboratory was opened

Replies to a questionnaire (outlined previously under "Methods of Investigation") were received from 175 physicians and surgeons from all parts of the state Of this number, 125 send all of their removed tumor specimens to the state laboratory, ten send some of their material, and thirty-five do not send any of their specimens to that laboratory, while five give no information on this point

Of those not sending their specimens of tumor tissue to the state laboratory for diagnosis, twelve make their own pathologic diagnoses, twelve send their specimens to commercial laboratories outside of the state, eight send their tumor tissue to some other surgeon of recognized ability in pathology, and three to a university pathologic department outside of the state

Practically all (170) believe that the average practitioner in such a state as North Dakota is not qualified, nor has he the facilities, to make accurate microscopic diagnosis of cancer Nearly all (168) agree that an early diagnosis is an important aid in preventing the spread of cancer, and in curing the disease Of 175 physicians who answered the questionnaire, 170 thoroughly approve of the doing of such work, free of charge, in a state laboratory as a public health measure in helping to control cancer With a few exceptions, practically all who have sent their specimens to the state laboratory have been satisfied with the diagnosis as made In one or two instances the pathologic diagnosis did not coincide with the subsequent clinical history, but the few complaints made were chiefly based on the length of time occasionally necessary before a diagnosis could be received in parts of the state far removed from the laboratory

Since the opening of the North Dakota Public Health Laboratory in 1907, about 1,000 specimens of tumor tissue have been examined free of charge, the number of specimens the first year (1907-1908) being twenty-four, while the number for 1914-1915 was 218, thus showing a decided growth in the amount of tumor diagnostic work demanded of the public health laboratory

Undoubtedly the same results and opinions as given above would be obtained from the majority of states which have been undertaking such work, if a canvass of the practitioners of each state could be made

RECOMMENDATIONS

Based on the foregoing study, the following recommendations are submitted as worthy of consideration in the campaign against cancer

1 So far as consistent with local conditions, facilities should be offered under public auspices in each state for the diagnosis of tissue suspected of being cancerous Preferably, these should be made free of charge

2 The logical place for the doing of such work is the laboratory of the state health department It is not to be supposed that such work will be given the preference over other work now being done by these laboratories

3 To cover this work, in those states which have no such facilities, additional money should be appropriated

4 Judgment must always be used by surgeons in the removal of suspected cancerous tissue for diagnosis, and the value of a microscopic diagnosis should appear to outweigh the risk involved before such a procedure is adopted

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VESICAL DRAINAGE

HISTORICAL REVIEW AND PRESENTATION OF A NEW APPARATUS *

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The numerous forms of apparatus that have been devised for the purpose of disposing of urinary drainage following suprapubic cystostomy are evidence of the difficulty of the problem When we consider the conditions to be met, it is hardly to be hoped that an entirely satisfactory apparatus is possible, if by this we mean an apparatus that will permit no urinary leakage whatever, from the time of operation until the fistula is healed The method of choice is that which most nearly approaches this ideal efficiency, which requires the least attention and which causes the patient the least inconvenience In addition to the above requirements, the apparatus should be reasonably inexpensive and not too elaborate

BRIEF REVIEW OF METHODS PREVIOUSLY DESCRIBED

Of the various forms of apparatus, the simplest is a rubber tube through the suprapubic wound draining the urine into a receptacle beneath the bed This method works well temporarily, but the impossibility of maintaining a tight fit makes it unsatisfactory, because good siphon action depends on a constant supply of fluid and the exclusion of air from the bladder The first mention of the suction exerted within the bladder by a column of urine descending in a tube was made by Chiene[1] of Edinburgh in 1880 His article, however, referred, not to suprapubic drainage, but to drainage through the urethra by means of a retention catheter, the siphon action being dependent on the fact that the lower end of the drainage tube was immersed in a bottle of carbolized water, which overflowed into a basin Clogging of the tube with mucus was prevented by "raising the bottle night and morning in order to make a back-flow, which cleans the instrument" When this natural siphon is used for suprapubic drainage, a loop or a U-bend in the descending arm, which has been frequently described, is an improvement, because here the urine collects until a sufficient quantity has accumulated to descend in the form of a solid column, or fluid piston, which exhausts the air behind it, thus producing intermittent suction within the bladder Even up to the present time there appear in the literature occasional articles[2] calling attention to this natural siphon method of suprapubic drainage, and claiming for it advantages over other methods on account of its simplicity Burckhardt[3] in 1889 solved the problem of suprapubic drainage by making also a perineal incision and inserting a tube He stated that for five years he had made a practice of combining perineal drainage with every case of suprapubic cystostomy, following a method first used by Frere Côme (Jean Baseilhac) in the eighteenth century

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* From the James Buchanan Brady Urological Institute

Numerous modifications have been described of the form of apparatus dependent in principle upon the suction exerted in a tributary tube by a column of water descending through a vertical tube from an overhead reservoir Such forms of apparatus are familiar to all This principle was first applied to surgery by Potain[4] in 1869, who used siphon suction for the drainage of empyemas The earliest available description of such an apparatus applied to suprapubic drainage was that of E H Fenwick[5] in 1888, who says, "An irrigating can is placed on a chair at the bedside, and its tube, with a clip affixed to regulate the outflow, dropped into the chamber under the bed The drainage tube from the bladder is then connected with it at an acute angle" An improved apparatus, utilizing the same principle, was described by Cathcart[6] of Edinburgh in 1895, and a modification of this the following year by W W Keen[7] of Philadelphia, who acknowledged Cathcart's priority This was challenged by Dawbarn,[8] who described his own apparatus immediately after Keen's publication, stating that he had made use of it for four years Referring to Cathcart's apparatus, he further stated that the idea of siphon drainage did not originate with Cathcart in England, but was first used in America about 1875 by Dr Snow, a dentist in Buffalo As a matter of fact, Cathcart and Dawbarn were both preceded by Fenwick and also by Spehl,[9] who in 1889 described a "siphon-laveur de la vessie" Since 1895 modifications have been described by Heaton, Walker, Wacobarn, Clerc-Dandoy, Connel, Hamilton, Chenoweth and others

These methods are all essentially similar, in that they employ an overhead reservoir of water which is refilled at intervals, the tube descending from the reservoir being connected by a T to the tube from the bladder They differ in their methods of mechanically interrupting the flow from the reservoir, with the object of producing intermittent siphonage Chenoweth's[10] apparatus combined irrigation with drainage Clerc-Dandoy[11] employed a urethral catheter for continuous irrigation of the bladder, the excess of fluid being drawn off by a suprapubic siphon Kenyon and Poole[12] in 1909 described methods of making use of suction for various purposes in the operating room, and four years later Kenyon[13] described the application of the same principle to postoperative treatment The form of suction was that produced by a filter pump or by a steam ejector, the suction being piped from the pump to the operating room or to the ward, and distributed along the baseboard to several beds This form of suction was used not only for suprapubic drainage, but also for the drainage of various wounds from which the discharge was profuse and irritating to the skin, as in the case of fecal fistula In order to render the excessive suction harmless, he devised an outer perforated tube, embodying the same principle as that described by Heaton[14] in 1898, which surrounded the inner suction tube in the wound, thus providing for a free circulation of air and preventing contact of the wall of the cavity with the suction tube Heaton says "The fluid, as fast as it collects in the cavity, trickles through the perforations of the outer tube and is then sucked up by the open end of the inner tube"

Kaczkowski[15] in 1899 used the same suction method, combined with a dumbbell-shaped rubber balloon, which was inserted into the suprapubic wound and then inflated, the suction catheter passing in through the center The idea was that the balloon approximated the bladder wall and the abdominal wall, preventing urinary infiltration Probably the most elaborate suction apparatus is that of Chetwood,[16] who in 1914 described a low-speed motor and pump constructed specifically for the purpose The motor and pump are run continuously, the amount of suction being reduced by means of a needle valve between the pump and drainage bottle, the lowered pressure within which is measured by means of a vacuum gage He also mentions having used a hydraulic suction pump applied to a water faucet in the patient's room and connected directly to the drainage bottle In 1915 Ballenger and Elder[17] again described the use of the hydraulic suction pump in the patient's room, combining the drainage with irrigation According to their method the tube is removed from the bladder after about ten days and

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[1] Chiene J Bladder Drainage Edinburgh Med Jour 1880 xxvi 516

[2] Madden F A Plea for the Simple Method of Bladder Drainage Lancet London 1908 i 48

[3] Burckhardt H Ueber Blasendrainage nach Sectio alta, Zentralbl f Chir 1889 xvi 737

[4] Potain Bull therap lxx 66 quoted by Bryant Aspiration Drainage in Empyema Surg Cynec. and Obst iii 296

[5] Fenwick E H Illust. Med. News 1888-1889 i 2 abstr Ann Surg ix 312

[6] Cathcart, C W A Simple Form of Exhaustion Pump for Use after Suprapubic Cystotomy Brit Med Jour 1895 ii 968

[7] Keen W W An Improved Apparatus for Drainage by Siphonage in Operations on Bladder Chest and Other Cavities Ann. Surg 1896 xxiii 174

[8] Dawbarn R. H M A Simple and Reliable Means of Bladder Drainage Ann Surg 1896 xxiii 499 A Simple Method of Drainage of the Bladder after Suprapubic Incision, ibid 746

[9] Spehl E Siphon laveur de la vessie Ann d mal. d org genito urin 1889 viii 114

[10] Chenoweth, J S A Device for Prolonged Irrigation and Drainage of the Bladder Kentucky Med Jour July 1908 vi 313

[11] Clerc Dandoy Drainage de la vessie par l irrigation continue apres la taille suspubienne xiii Cong internat d. med Sect d chir urin. 1900 143

[12] Kenyon and Poole An Apparatus for Aspiration Surg Gynec and Obst. 1909 ix 675

[13] Kenyon J H Continuous Suction and Its Application in Pos operative Treatment Surg Gynec and Obst 1913 xvii 115

[14] Heaton G Note on the Drainage of Large Cavities after Surgical Operation Brit. Med Jour 1898 i 207

[15] Kaczkowski New Method of Drainage of the Bladder after Sectio Alta to Prevent Urinary Infiltration Centralbl. f Chir March 18 1899 abstr The Journal A M A. 1899 xxxii 783

[16] Chetwood C H Drainage of the Bladder Following Suprapubic Operations Med Rec. New York 1914 lxxxvi 602

[17] Ballenger and Elder Jour Med Assn Georgia 1915 v 132

"the urine collected from the outer part of the incision under a glass bell-shaped cover held in place with adhesive strips"

The methods dependent upon other means than suction are not so numerous Fowler[18] in 1899, employing the principle of capillary drainage, used strips of gauze, one end tucked into the bladder and the other end lying on a rubber sheet, from which the urine drained into a urinal For permanent suprapubic drainage, Gerrish[19] in 1892 used a silver plate rimmed with rubber and held in place by a belt and perineal straps Through the center passed a tube which led from the bladder to a urinal For the period immediately following operation he used a flexible siphon In 1895 Dugan[20] described his modification of an S-shaped tube of hard material previously described by Senn, which retained itself in the bladder by virtue of its curve Bloodgood's[21] apparatus, devised in 1896, for both "immediate and permanent" drainage, consists of a rubber bag held to the suprapubic region by a belt, and draining the bladder through a hard rubber tube inserted in the fistula In England several forms of apparatus were described, dependent on a tightly fitting nonleak dam about the suprapubic wound Colt's[22] article in 1905 described an oval inverted cup of glass, open at the top and grooved around the base for a tightly fitting rim of sheet rubber which was cemented to the skin by a solution of pure rubber dissolved in naphtha Finckh,[23] in Germany, later reported favorable results from the use of Colt's apparatus In 1907 Irving[24] devised a celluloid cap which depended upon elastic bands around the buttocks for its tight fit around the suprapubic wound This was connected by two rubber tubes to a urinal between the patient's legs A method of cementing a perforated piece of sheet rubber to the skin around the fistula and then folding the free edges of the rubber over to form a flattened tube which conducts the urine to a bottle was described by Sinclair[25] in 1909 McKenna[26] used a double rubber apron applied to the suprapubic region, the inner surface fitting closely to the skin

VACUUM METHOD

The following is a description of the vacuum method as used at present in the James Buchanan Brady Urological Institute This apparatus I have previously described,[27] but without the improvement in the form of a mercury manometer, which acts as a safety valve, permitting air to pass either in or out of the urine bottle as occasion requires A glance at Figure 1 will give a general idea as to the principle of the apparatus Within the large bottle is a vacuum, which is very gradually decreased in strength by leakage of air, through a minute capillary glass tube, from the smaller bottle, so that within the smaller bottle there is maintained an air pressure which is slightly less than one atmosphere By virtue of this very slight difference in pressure, the urine is drawn out of the bladder, through the catheter and tube, and drips down into the small bottle, replacing the air which has leaked into the vacuum The only care necessary is to empty the urine bottle when it fills, and to exhaust the air from the vacuum bottle at intervals of not less than forty-eight hours

In the diagram (Fig 2) the relative proportions are somewhat distorted for the sake of clearness The bottles V and U have a capacity of 8 and 2 liters, respectively The larger (V) is known to the trade as a two-gallon, narrow-mouth packing bottle, and the smaller is an ordinary two-quart mineral-water bottle Bottle V is provided with an air-tight, four-hole rubber stopper through which pass two L-shaped pieces of glass tubing, one straight piece and one T Bottle U has a two-hole stopper with glass tubes, as shown in the diagram Catheter C, at the very tip of which there are several small perforations, passes into the bladder through the suprapubic wound, where it is held by strips of adhesive plaster, and is connected with the urine bottle by a rubber tube, with a lumen not more than 5 mm in diameter The only means of communication between bottles U and V is through the minute capillary tube (CT), which hangs within the vacuum bottle and which makes the rate of air flow from the smaller to the larger bottle exceedingly slow The small mercury manometer, which also hangs within the vacuum bottle, and which measures the air pressure within the urine bottle, will be described below

The capillary tube is shown in detail in Figure 3 The outer protecting sheath is a large glass tube about 1 cm in diameter and 10 cm long, with a constriction at the middle to support the cotton filter (F) At either end this tube resembles the open end of a vial, the glass being grooved to fit a screw-cap which holds the rubber stopper tightly in and withstands the inside air pressure Both stoppers and screw-caps are perforated for smaller glass tubing The air, coming from the urine bottle, enters through the upper stopper, then passes through the tightly packed cotton plug (F), where it is filtered, and finally forces its way through the capillary tube (CT) and on into the vacuum The capillary tube is made from a piece of glass tubing 6 mm in diameter, which is drawn and then redrawn to form an exceedingly fine, flexible, hairlike tube, the actual lumen of which varies between 30 and 40 microns, according to its length Since the making and testing of these capillary tubes is quite complicated and time-consuming, it is an economy to buy them

The manometer, with its two bulbs, as described below, is also made with some difficulty For these reasons, and on account of the inconvenience of assembling the various other small parts, arrangements have been made with the Willms Surgical Instrument Company of Baltimore to furnish the entire apparatus The method of testing the capillary tube has been previously described[27] in detail In brief, the rate of air flow through the capillary tube is determined and regulated by connecting the large end with a vacuum of known strength, and causing the air which enters through the tube to bubble through a column of water as it is drawn into the vacuum The most satisfactory caliber of capillary tube has been found to be that which permits an air flow of such a rate that seventy to eighty air bubbles per minute pass through the water, from a tube with a lumen 4 or 5 mm. in diameter, into a vacuum that will sustain a column of mercury 60 cm. in height. The piece of rubber tubing (see Fig. 2) attached to the lower end of the capillary tube obviates danger of breakage, by swinging as the bottle is carried.

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[18] Fowler, G R A New Method of Drainage of the Bladder after Suprapubic Cystotomy, New York Med Jour, 1889, l, 257

[19] Gerrish, F H An Appliance for Preventing the Chief Annoyance Attending a Permanent Opening in the Bladder, Tr Am Surg Assn, 1892, x, 235

[20] Dugan, W C Jour Cutan and Gen Urin Dis, 1895, xiii 249

[21] Bloodgood, J C A New Apparatus for the Immediate and Permanent Drainage of the Urinary Bladder after Suprapubic Cystostomy, Bull Johns Hopkins Hosp, 1896, vii, 64

[22] Colt, G H The Suprapubic Dressing, Lancet, London, 1906, ii, 860

[23] Finckh, E Zur Nachbehandlung der suprapubischen Cystotomie, Beitr z klin Chir, 1908, lix, 78

[24] Irving, H The After Treatment of Cases of Suprapubic Cystotomy a New and Economic Method, Lancet, London, 1907, ii, 1756

[25] Sinclair, H H The Control of Urinary Drainage after Cystotomy, Ann Surg, 1911, liii, 387

[26] McKenna, C M A Device in Suprapubic Openings, Surg, Gynec and Obst, 1912, xiv, 635

[27] Davis, E G A Vacuum Apparatus for Suprapubic Drainage, Surg, Gynec and Obst, 1915, xxi, 245

The small U-shaped manometer, of glass tubing with a lumen of 5 mm., shown in detail in Figure 4, both indicates and regulates the air pressure within the urine bottle. It is placed within the vacuum bottle, as is the capillary tube, merely that the apparatus may be compact and safe from danger of breakage, but it connects directly with, and is really a part of, the equipment of the small bottle. It is shown in Figure 2 that this manometer communicates directly, by means of the T-tube, with the urine bottle, and that one arm passes in through the stopper of the vacuum bottle, while the other passes out again and communicates with the outside air. In the horizontal portion of the U-bend is a small amount of mercury (Hg), which, if sufficient pressure is exerted, will permit air to pass in either direction. Just at the lower end of the arm which communicates with the outside air is a small bulbous swelling in the glass which acts as a reservoir for the mercury. The bulb in the other arm, located about 5 or 6 cm. from the bottom, is merely to prevent the mercury from jumping out of the tube when the air bubbles through. In case the vacuum draws the air from the urine bottle more rapidly than it is replaced by urine, there will be a gradual decrease in pressure within U, as will be indicated by a very slow rise of the mercury in the arm of the manometer with higher bulb. But this pressure cannot continue to decrease, because the amount of mercury is limited, and after it has attained an elevation of about 20 mm. the supply of mercury in the lower bulb or reservoir has been consumed and air is allowed to bubble through, passing into the urine bottle. The direction of the air flow is as shown by the upper arrow in Figure 4.

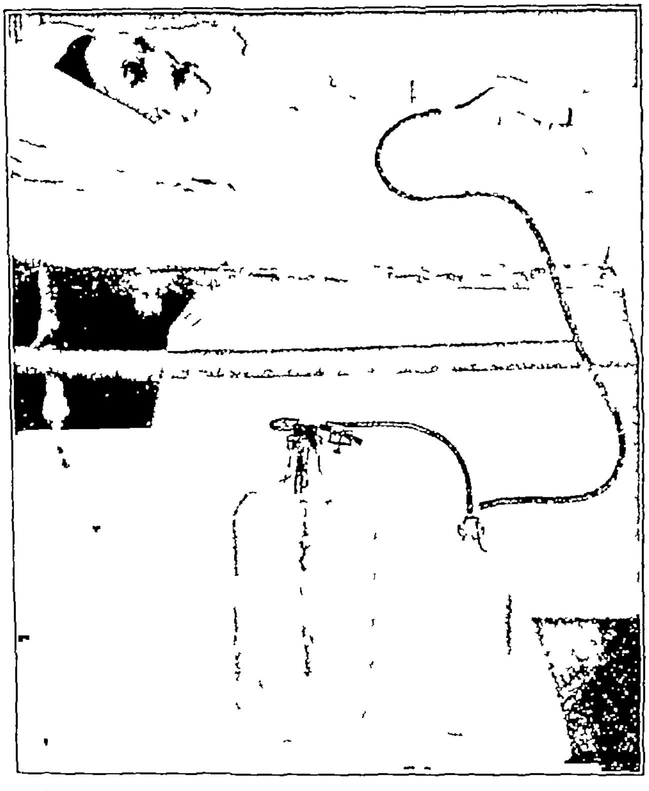

Fig. 1.—Entire apparatus in position. The bottles may be placed on the floor, or in order to facilitate the moving of the bed they may be suspended by an iron framework.

We thus have a safety valve which prevents the pressure within the urine bottle from differing from atmospheric pressure by more than 20 mm. of mercury, and which therefore prevents the catheter from exerting more than the gentlest suction within the bladder. Of course the amount of suction attainable varies directly with the amount of mercury placed in the manometer, and remains constant wherever desired. A very strong suction might be produced by making a manometer with a longer arm. For suprapubic drainage, a suction equivalent to 20 mm. of mercury, or even less, is sufficient. On the other hand, it is occasionally necessary that air pass through the manometer in the other direction, these occasions being when the rate of urinary secretion is sufficient to establish a siphon. The urine then flows into the urine bottle more rapidly than the air escapes through the capillary tube, and therefore the air pressure within the urine bottle becomes slightly more than one atmosphere. But this positive pressure does not immediately check the siphon flow, because the descending column of urine is about 40 cm. in height, which is equivalent to about 30 mm. of mercury. Before a positive pressure of more than perhaps 3 or 4 mm. has been attained, the mercury, with very little resistance, is displaced from the horizontal arm of the manometer into the lower bulb, where it spreads out, allowing the air to bubble by and escape through the open tube, and thus the siphon is permitted to continue to flow. This rapid siphon flow is only occasionally established, perhaps every other day or two with some patients, and not at all with others. The manometer, on these occasions, allows the escape of air and prevents leakage, which otherwise would occur in case the siphon flow should be checked by compressed air. In brief, the capillary tube takes care of the average urinary secretion, and the siphon action provides for any unusual excess, the mercury manometer making the siphon action possible.

During the preparation of this article I find that Perthes[28] in 1895 made use of a somewhat similar form of manometer, which permitted the entrance of air when a certain degree of lowered pressure was reached, and thus controlled the amount of suction produced by an apparatus devised for the drainage of empyemas. His manometer, however, made no provision for the escape of air, and his apparatus differed radically from the one I have described.

For renewing the vacuum, the ordinary laboratory hydraulic pump or filter pump (Fig. 6) is used, bottle V being disconnected from bottle U and carried to the pump, which may be located anywhere in the hospital. This filter pump is inexpensive and may be purchased from any laboratory supply house, together with a rubber-lined coupling which slips on to any water faucet, or, if a more permanent fixture than that shown in Figure 6 is desired, it is well to use a coupling which attaches to the faucet by means of screw threads. To exhaust the bottle the screw clamp is opened and the tube attached to the pump, the water being allowed to run perhaps seven or eight minutes, or any length of time in excess of this The amount of time necessary, of course, varies with the size of the pump and the rate of the water flow When the bottle has become sufficiently exhausted, a peculiar sucking noise is produced, similar to the sound caused by screwing the screw clamp shut while the water is running The vacuum thus produced, which is of sufficient strength to sustain a column of mercury 750 mm in height, will last at least forty-eight hours, providing the lumen of the capillary tube is of the correct diameter Even after three days the vacuum bottle will not have become quite filled with air, and on two occasions, when the bottle was forgotten and allowed to run seventy-two instead of forty-eight hours, there was no leakage After forty-eight hours, however, leakage might occur, because the rate of air flow, and therefore the amount of suction, varies inversely with the amount of air which is present in the vacuum bottle For this reason the routine of renewing the vacuum every forty-eight hours was adopted

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[28] Perthes, G.: Ueber ein neues Verfahren zur Nachbehandlung der Operation des Empyems und zur Beseitigung des Pneumothorax sofern er auf einem Defekt der Thoraxwand beruht, Beitr. z. klin. Chir., 1895, xx, 37.

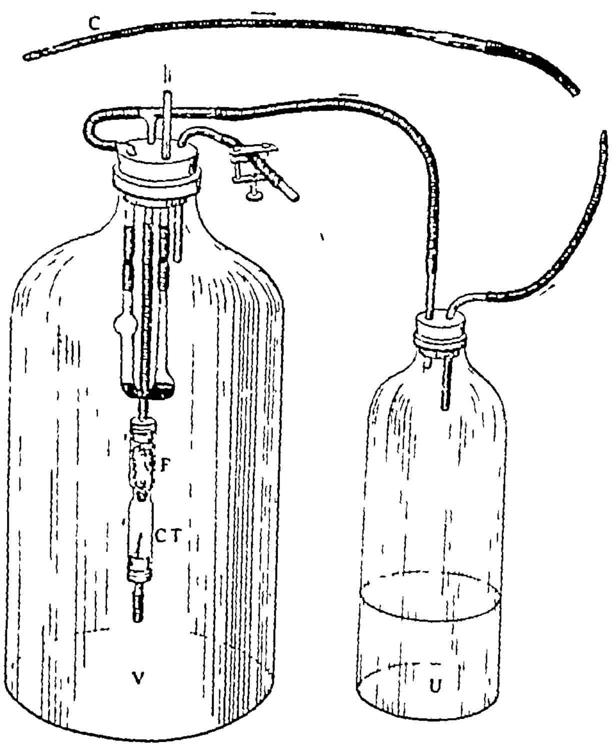

Fig 2 —Diagram showing relations of various tubes Arrows indicate direction of air flow

The management of the apparatus is as follows At the time of operation a small soft rubber tube or a large catheter, very near the tip of which are several small perforations, is left in the bladder In case a prostatectomy has been done and there is much bleeding, it is necessary to use a large tube at first, and then substitute a smaller one later on A tube with a lumen 5 mm in diameter serves the purpose admirably, and, if there is no bleeding, may be used from the start Bladder irrigations will prevent clogging of the tube with mucus and pus, but these are seldom necessary oftener than every three or four days, unless there is a marked cystitis Most cases will drain well with no irrigations at all When the tube or catheter is changed, which need not be more frequently than every three or four days, it should be replaced well down into the bladder It should fit the sinus approximately, but, in order to insure perfect drainage, it need not fit tightly Smaller catheters are substituted as the fistula granulates, one even as small as a 14 F draining perfectly well The rubber stopper must be kept tightly in the urine bottle Care must be taken that the latter be emptied before it overflows, as otherwise urine would be drawn over to the vacuum bottle and the capillary tube clogged and ruined For the same reason it is essential that, of the two glass tubes ending within the urine bottle, the one from which the urine drips should be the longer

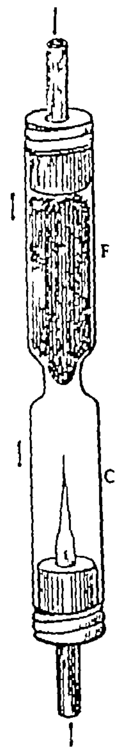

Fig 3 —Detail of capillary tube, with outer protecting glass sheath, F, cotton filter, CT, capillary tube

One may test the apparatus by simply compressing the tube connecting the two bottles, which has the same effect as a clogging of the catheter, and which should cause a slow rise of the mercury in the arm of the manometer up to a height of about 20 mm, and then a quick fall, due to the passage of an air bubble Failure of the mercury to rise indicates either that the vacuum needs renewal or that the urine bottle has been allowed to overflow, thus clogging the capillary tube The capillary tube and the manometer are delicate and should be handled with care When once suspended within the vacuum bottle, they are safe and may remain permanently undisturbed A small square pad of cotton or gauze, with a slit cut to the middle for the catheter, has been found to make a convenient dressing, strips of adhesive plaster holding both pad and catheter in place Allowing the patient to sit up in a chair makes the drainage none the less perfect, the bottles being placed upon the floor by the side of the chair A smaller, but shorter-lived, vacuum bottle has been used, and the patient allowed to roll about in a wheel chair with the two bottles upon the foot-board While the patient is in bed, an iron framework is used, which suspends the bottles a few inches above the floor and permits the bed to be moved about with more convenience

As the case records below show, the incisions are kept, not almost dry, but absolutely dry, and without a drop of urinary leakage for weeks at a time The complete lack of moisture is shown by the fact that the dressing becomes adherent to the granulation tissue about the catheter Another feature is the very slight amount of suction, which is just adequate and no more and which permits the use of an unprotected suction catheter in the bladder with no damage to the mucosa and no discomfort to the patient The catheter may therefore be decreased to a very small size as the fistula granulates, the interval between the removal of the catheter and the final healing being thus reduced to a minimum Although the above detailed description is complicated, the apparatus itself is in a simple and compact form, and is automatic, being enclosed within a bottle which need never be uncorked It requires minimum attention, and its action is not dependent on a water supply in the room, or on a motor In all cases the sutured portions of the wound healed by first intention

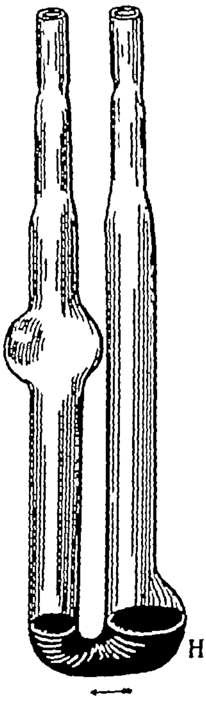

Fig 4 —Detail of mercury manometer Air may pass through in either direction, as indicated by the arrows, Hg, mercury

CASE REPORTS

The following six cases are the last of a series of twenty-two An accurate record of leakage was not kept in the other seventeen, but they did not differ materially from these here presented

Case 1—The patient entered the hospital with a suprapubic cystostomy done elsewhere for drainage The prostate was removed by the perineal route and the vacuum drainage apparatus connected to a No 14 French catheter in the suprapubic fistula On the tenth day there was drainage of urine over the abdomen due to a clogging of the catheter with mucus which was the only urinary leakage during the entire convalescence from either the suprapubic or the perineal wound The suprapubic catheter was left in position for a period of thirty days, being changed every fourth or fifth day Following its removal the edges of the tiny fistula approximated there being no urinary leakage whatever

Case 2—A suprapubic cystostomy was done on account of a recto-urethral fistula Continuous drainage was kept up for twenty-nine days During this period the abdomen became wet once on the fourteenth day due to a clogging of the catheter and with this exception remained entirely dry at all times The catheter was changed every fourth or fifth day, there were no bladder irrigations

Case 3—A suprapubic cystostomy was done on account of a periurethral abscess From the viewpoint of efficient drainage this result was the most unsatisfactory of the entire series probably because of the fact that the patient was continually delirious and in constant motion He frequently tampered with the drainage tube and in fact pulled the catheter out of the bladder several times The urinary leakage was quite marked on the third fourth fifth and sixth days and also on the eleventh and seventeenth Drainage on the other days however, was perfect There were no bladder irrigations The patient left the hospital on the eighteenth day

Case 4—A suprapubic prostatectomy was done following an incomplete perineal prostatectomy at another clinic some months previously Continuous drainage was maintained for twenty-five days, there being urinary leakage on the first second and fourteenth days The first leakage occurred by the catheter becoming clogged with mucus and pus, the result of an alkaline cystitis This cystitis which was quite severe, cleared up after three days Leakage on the fourteenth day was due to the fact that the catheter was not placed well down into the bladder Although the catheter was not removed until the fistula had become quite small, suprapubic drainage persisted until a retention catheter was placed in the urethra some days later During the first ten days after operation, daily bladder irrigations were given

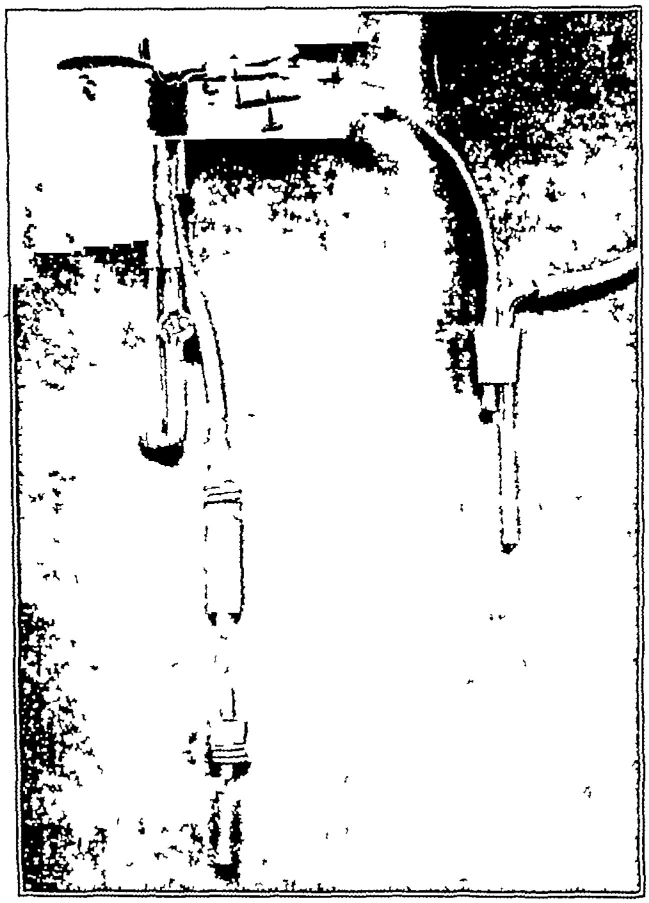

Fig 5—Capillary tube, manometer rubber stoppers and connecting tubing shown without bottles

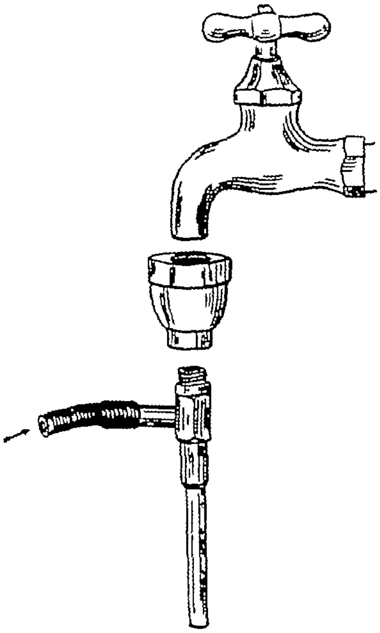

Fig 6—Filter pump and rubber lined coupling for attaching to faucet without screw threads

Case 5—Suprapubic drainage was necessary on account of an impermeable urethral stricture Up to the present, the thirty-ninth day after the operation, the patient has been at all times entirely dry The suprapubic catheter has been changed every fourth or fifth day

Case 6—Through a suprapubic incision, a large pedunculated vesical tumor was excised with the cautery, and on account of the presence of mucus and blood and bits of slough a drainage tube larger than usual was sutured into the bladder A large tube however, does not act well as a siphon For this reason, the suction was connected to a catheter passed into the bladder through the large tube, the latter serving merely as a guide Up to the present the sixth day after the operation there has been no leakage, the catheter having been changed once When this method is used, it is necessary that there should be a water-tight joint where the catheter enters the larger tube This is easily made by the use of a piece of large glass tubing about 5 cm long, one end of which has been drawn out to such a size that it just admits the catheter, and the other end fitting tightly into the end of the large rubber tube Where the catheter enters the glass tube a small cuff of elastic rubber tubing, overlapping both serves to prevent leakage and keeps the catheter from slipping Thus, when it is necessary to remove the catheter it may be easily replaced and retained at any depth in the bladder It is advisable that the large tube be of such a length that this joint may lie in a horizontal position on the abdomen

COMMENT BY DR HUGH H YOUNG

This ingenious apparatus, invented by Dr Davis, has revolutionized the technic of urinary drainage at our clinic, completely transformed the postoperative treatment, changed the condition of the patient from soggy discomfort to cleanly comfort, and produced healthy dry granulating wounds in place of the unhealthy water-logged wounds with adherent urinary salts which we used to see The devices upon which this automatic apparatus depends are as simple as they are clever, the preparation of the vacuum bottle every two days is an easy matter, and the management of the apparatus free from difficulties and complications It is destined to do much for urinary surgery, as well as for other fields requiring constant drainage [29]

THE SUPERNUMERARY URETER

REPORT OF A CASE OF COMPLETE UNILATERAL DUPLICATION

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Reports of supernumerary ureters are becoming more frequent, which very frequency demands records of all such cases, as it emphasizes the possibility of the existence of such an anomaly in every obscure condition of the upper urinary tract While congenital change in a ureter may be associated with corresponding variation in the kidney, the ureteral condition, whether it be an alteration in form,[1] in location,[2] or in number,[3] will not infrequently be the principal factor in the production of a pathologic condition

REPORT OF CASE

History—Mrs T W, Polish, aged 26, with negative previous history, during the forenoon of April 15, 1914, experienced a sudden severe pain in the upper right abdomen relieved somewhat by pressure, with no tendency to radiation and not associated with nausea or vomiting The urine contained macroscopic blood, and a moving renal calculus was suspected, further diagnostic measures at this time however, were refused The patient was again seen, Aug 7 1915, when she came complaining of a marked dysuria with a constant throbbing pain over the bladder region She was having frequent bladder spasms, at which time a few drops of bloody urine would be expelled While the severe abdominal pain had not been repeated, during the past sixteen months she had had periods of bladder irritability Her present attack began four months before, and gradually grew worse, until when seen she was having no rest night or day She had missed the last two menstrual periods

Physical Examination—Palpation elicited tenderness over the bladder region, and vaginal examination, with pressure on the trigon of the bladder, was extremely painful The terminal portion of the right ureter as palpated by the vagina was prominent and sore There was a dull ache over the right kidney posteriorly, and deep fist percussion over this area produced pain The temperature was 99.2, the pulse 100 The blood Wassermann was negative

Catheterized bladder urine, 1½ ounces, contained 0.25 per cent albumin, from five to ten pus cells and from ten to twelve blood cells to the ⅛ objective, with few short strings of streptococci The last few drops of urine, as they flowed from the catheter, were red with fresh blood Catheterization was painful

Cystoscopic Examination—Cystoscopy was performed, Aug 14, 1915, and demonstrated a violently inflamed trigon with flakes of pus and mucus clinging to its raw surface Just to the right of the median line, situated on the posterior margin of the trigon, was a small papilloma Later twice applying the high frequency spark caused it to disappear entirely The left ureteral meatus was normal in contour, but located at an abnormally high position in the bladder On the right side of the bladder at its usual location was the right ureteral orifice, edematous and congested, while downward and inward from this meatus, in the substance of the trigon, was a third opening, almost round, larger than the normal and devoid of the normal liplike folds The inflammatory process centered about this opening There were two small ulcerations located as indicated in Figure 1 The remainder of the bladder was normal

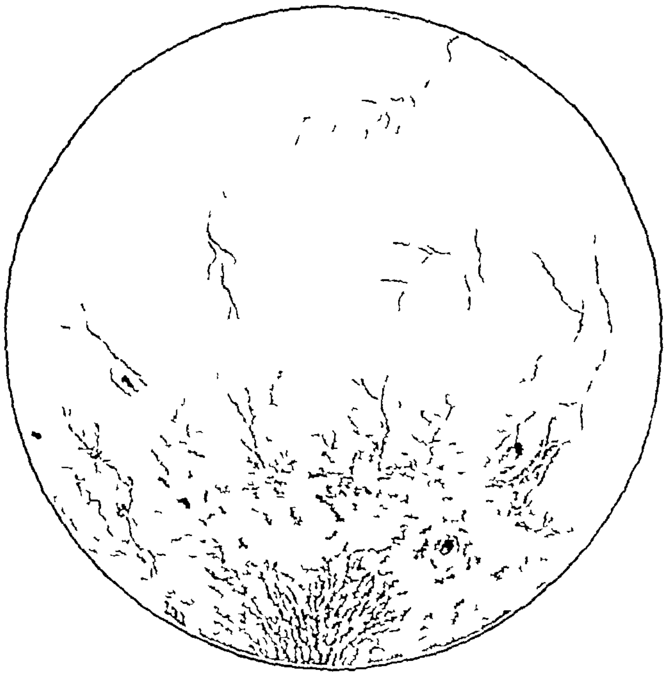

Fig 1 —Cystoscopic findings demonstrating three ureteral meatuses Note the irregularity of the bladder picture and that the inflammatory process completely surrounds the abnormal right opening, it seemingly being more intense in this region

Urine was observed coming from the left and upper right openings in a normal manner, while from the lower right opening it could be detected only at long intervals and then not with normal force At a later examination, Sept 5, 1915, the opening was found entirely covered with mucus It was watched for several minutes, but no urine was seen passing from this opening, but when with the tip of a ureteral catheter the mucus was removed, a larger quantity than had at any time previously been observed coming from it passed into the bladder During ureteral micturition this opening did not advance into the cystoscopic field as does the normal and it remained open when passive The relative sizes of the three openings are accurately recorded in Figure 1

Urine from the left kidney contained 2 6 per cent urea Phenolsulphonephthalein appeared from this kidney in three minutes assuming a deep color in four minutes Urine collected from the upper right opening contained an occasional short string of streptococci Urea was 2 5 per cent, and phenolsulphonephthalein appeared in four minutes, assuming a deep color in seven minutes Urine collected from the lower right opening showed an occasional pus cell, many strings of streptococci, urea only 0.3 per cent, and phenolsulphonephthalein appeared in fifteen minutes in traces only The quantity of urine secreted was only one-third that collected through each of the other two catheters in the same length of time Examinations for tubercle bacilli were negative

Thorium nitrate was injected, and pyelograms were made of the right kidney (Fig 2) Both kidneys were well up in place The two pelves of the right kidney were completely separated, and the ureter from the rudimentary cephalic pelvis entered the bladder at the caudal opening This ureter was the larger The exact relative position of the two ureters in their course varied, as determined by roentgenograms taken at few minute intervals, the ureter from the lowermost pelvis being more mobile Just before the ureters entered the bladder they crossed, the ureter leading to the lowermost, supernumerary bladder opening passing posteriorly, a relation constant in all our roentgenograms

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[29] In addition to the references already given, the following will be found of interest
Hamilton, A An Apparatus for the Intermittent Postoperative Drainage of the Bladder, The Journal A M A, 1908, l, 962
Connel, K A Suction Apparatus for Continuous Drainage, Ann Surg, 1903, xxxvii, 886
Wacobarn Rev med, Jan 1, 1899, abstr, The Journal A M A, 1899, xxxii, 432
Walker, J B Continuous Drainage of Bladder, Ann Surg, 1899, xxx, 515
Churchman, J W The Use of Suction in the Postoperative Treatment of Bladder Cases, Bull Johns Hopkins Hosp, 1916, xxvii, 69

[1] Eisendrath, D N Ann Surg, 1912, lv, 571

[2] Brewer Ann Surg, 1911, liii, 827

[3] Lewis Med Rec, New York, Oct 6, 1906, p 521

In this review of our case, we wish to emphasize (1) The frequency of the supernumerary ureter, (2) the surgical significance the anomaly may assume, and (3) the possibility of its recognition as a factor in the production of a pathologic condition early in the process

THE FREQUENCY OF URETERAL DUPLICATION

Complete bilateral duplication of the ureters is rare Levison,[4] in reviewing the subject in 1907, found only nine cases Braasch[5] has observed only one case The condition has been reported by Huntington,[6] Pawlow,[7] Wertheim,[8] Lydston,[9] Rumpel,[10] Kelly,[11] and others A complete study of the anomaly was made by Brown, Englebach and Carmen[12] in reporting their case

Complete unilateral duplication is more frequent Motzfeldt[13] found twenty-three double ureters in 4,500 necropsies Huntington,[14] in 5,000 dissections, is reported as having found only five cases of ureteral doubling Wertheim,[8] in 500 operations for carcinoma of the uterus, records only six cases of complete unilateral duplication In the clinical case demanding urologic investigation, the frequency is more marked Pawlow[7] observed three cases and reports six others Braasch, in 1912, reported seven cases of unilateral complete division of the ureter, and Weigert[15] saw seven cases in one year

Huntington concludes from his dissections that the most common ureteral anomaly is a double pelvis and ureter, with the ureters uniting before entering the bladder Cases of single pelvis with the ureter dividing above its insertion into the bladder have been reported Ransohoff[16] states that a duplication of half of a ureter is present in 1 per cent of all subjects

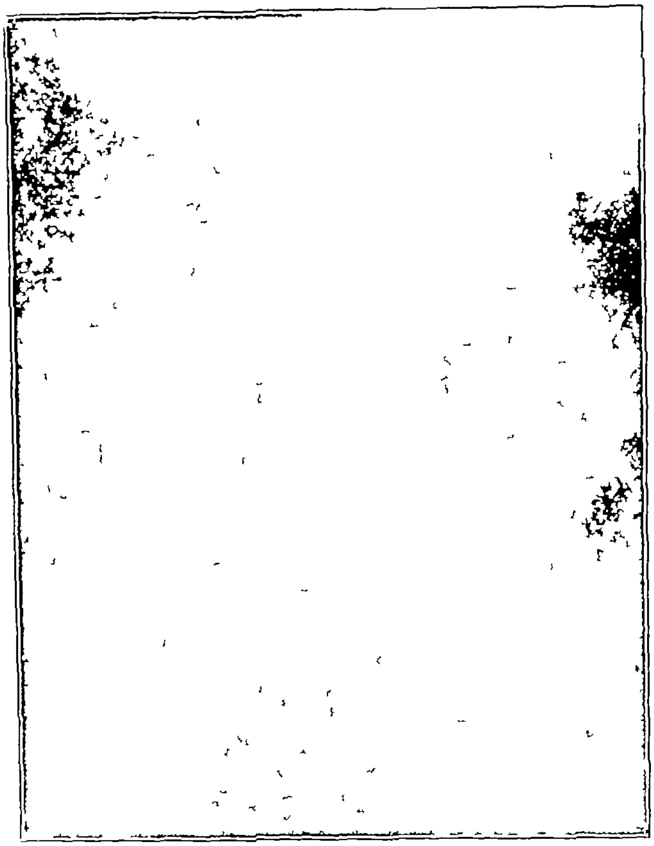

Fig 2 —Complete duplication of the right ureter and pelvis as determined by ureteropyelography A leaded catheter was inserted into the left ureter and 2 c c of thorium nitrate were introduced that we might not fail to locate exactly the position of the left kidney

THE SURGICAL SIGNIFICANCE OF THE SUPERNUMERARY URETER

Not infrequently ureteral anomalies, the surgical significance of which depends on the predisposition their very presence exerts on the development of hydronephrosis and infection, are associated with prenatal renal formations[17] which persist throughout life, rendering resistance to such changes below normal The possibility of the existence of this congenital alteration of the kidney lends an added clinical importance to every case of supernumerary ureter The surgical interest in a supernumerary ureter, however, is very much governed by the location of its meatus Should the opening be extravesical, its correction is possible only by surgical intervention When intravesical its relative position in the bladder will influence its surgical importance When located in the trigon near the vesical neck the folds of the mucous membrane act as valves, closing the opening and resulting in hydronephrosis[10] Should it be near the normal site of the ureteral meatus, this difficulty is not encountered, but if the opening be abnormally small, a condition which usually prevails, stasis is inevitable and infection is prone to occur If the opening is of normal size and has its normal sphincterlike action, the condition can remain latent throughout life, and if discovered will be of no clinical interest, but when there are no liplike folds about the opening, and it remains open when passive, although of normal size, the condition becomes a potential one for harm Draper and Braasch[18] assert that this "mechanical action of the valve can be dispensed with" if the "glomerulotubular pressure is maintained at normal"

In our case there was an absence of the sphincterlike action, the meatus did not grasp the introduced catheter as does the normal meatus, the orifice remained open at all times, it was the largest of the three meatuses, and we considered that the glomerulotubular pressure was lessened, as we felt justified in believing that merely sealing the meatus by mucus was sufficient to obstruct the flow of urine completely The physiologic action[19] of the meatus being absent, and the force of the urinary efflux into the bladder being below normal, conditions were ideal for regurgitation and infection from below, should such be possible

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[4] Levison, referred to by White and Martin Genito Urinary and Venereal Diseases Ed 8 p 506

[5] Braasch Ann Surg 1912 lvi, 727

[6] Huntington Harvey Lectures Series II, 1906-1907 Philadelphia J B Lippincott Co 1908

[7] Pawlow Deutsch Ztschr f Chir 1913, cxxi 425

[8] Wertheim, quoted by Brown Am Jour Obst., 1915 lxxi 669

[9] Lydston A Text Book on Genito Urinary, Venereal and Sexual Diseases Philadelphia, F A Davis Co, 1900 p 843

[10] Rumpel Cystoscopy as Adjuvant in Surgery New York Rebman Co 1910 p 7

[11] Kelly and Burnam Diseases of the Kidneys Ureters and Bladder New York D Appleton & Co 1914 ii 329

[12] Brown Englebach and Carmen Tr South. Surg and Gynec., Assn 1909, xxii, 248

[13] Motzfeldt Norsk Mag f Lægevidensk July, 1914

[14] Huntington, quoted by Furniss Am Jour Obst. 1915 lxxi 669

[15] Weigert quoted by von Bergman and Bull System of Practical Surgery Philadelphia Lea Bros & Co 1904 v 225

[16] Ransohoff Keen s Surgery, Philadelphia W B Saunders 1909 iv 203

[17] Losee Am Jour Obst. 1915 lxxi 672

[18] Draper, J W and Braasch W F The Function of the Ureterovesical Valve, The Journal A. M A., Jan. 4 1913 p 20

[19] Kretschmer and Greer Surg Gynec. and Obst. 1915, xxi 228 Pasteau O Jour d urol. July 15 1914 abstr, The Journal A M A. Aug 29 1914 p 810 Eisendrath D N and Kahn, J V Role of the Lymphatics in Ascending Renal Infection, The Journal A M A Feb 19 1916 p 561

As indicated, there was a wide variation in the character of the urine from the two ureters of the right kidney

Certain writers[7] have suggested the possibility of the development of a constriction of one ureter at the point at which the two ureters cross, thus producing stasis, it usually being the ureter draining the cephalic pelvis most affected In our case, because of the freely movable condition of the one ureter, such a complication would seem improbable

In a partial duplication of a ureter, the narrowing of the canal at its point of division, and the change in its projection thus produced, will often lend the condition a surgical importance

THE DETECTION OF THE SUPERNUMERARY URETER PRODUCING SYMPTOMS

The clinical history of a constant incontinence associated with periods of normal urination at once suggests the existence of a supernumerary ureter with an extravesical opening It may be extremely difficult to locate the orifice of a supernumerary aberrant ureter Furniss[20] and Kelly[11] have exhaustively reviewed the various locations of these meatuses and the difficulties encountered in their detection When the opening is intravesical, this symptom does not obtain, and the determination that an existing renal stasis or infection is associated with a ureteral anomaly, by the symptomatology alone, is impossible

Many such anomalies will at once be recognized by cystoscopy, and there is always some irregularity in the bladder picture But should the opening of the third ureter be among the folds of the trigon or vesical neck, chromo-ureteroscopy may be necessary Mucus covering the opening, as in our case, may prove confusing, and add to the difficulties in a diagnosis Should a ureteral division exist above its vesical opening, the anomaly cannot be diagnosed by cystoscopy alone Pawlow records a case of complete duplication of the ureter until the bladder wall was reached when the two ureters joined, having a common bladder opening It is by the combined use of the cystoscope and Roentgen ray that such cases may be detected In every cystoscopically diagnosable ureteral anomaly, the course of the ureters should be determined, by means of the roentgenogram with leaded ureteral catheters inserted, but in cases such as Pawlow[7] and Young[21] report, this may be insufficient and misleading, when pyelography will be necessary Any anatomic or physiologic alteration in the pelvis can thus be determined also That the case of partial ureteral duplication may be identified, the ureteral catheter should be introduced just within the meatus, and the thorium allowed to flow into the ureter Findings at dissection would indicate that many cases of partial duplication are being overlooked by the clinician The Roentgen ray alone, because of the enlarged kidney shadow, may suggest the anomaly, yet an accurate diagnosis cannot thus be made[22] The functional and bacteriologic tests, possible with the separate collection of urine through the catheter, have the same diagnostic value as in other urologic cases

It is most often the ureter draining the cephalic pelvis which has the abnormally placed opening, which is usually lower and nearer the midline, conforming to Weigert's rule Braasch[5] reports by illustration two cases with the ureter draining the cephalic pelvis entering the bladder at the cephalic vesical orifice

With the examination of a case as thus outlined, it is possible to recognize clinically every case of ureteral anomaly, and determine its surgical importance before a terminal pathology is encountered

With all available data in our case, any explanation of the attack of abdominal pain in 1914 must be purely speculative We had a complete duplication of the right ureter, with separation of the two pelves, the cephalic one being rudimentary There was evidence of infection of this supernumerary pelvis, and the function of this portion of the kidney was poor With the progress of pregnancy, postural treatments and the employment of urinary antiseptics, the bladder symptoms disappeared The dull ache remained over the right lumbar region, and cystoscopy demonstrated, Dec 20, 1915, the third opening still inflamed, with an existing edema of the subjacent mucosa The remainder of the bladder was normal

There was no special diagnostic significance in the presence of the papilloma

CONCLUSIONS

1 Supernumerary ureters are more common than generally appreciated by the clinician

2 They may be productive of a pathologic condition demanding surgical correction

3 An otherwise benign condition may be rendered malignant through the association with a supernumerary ureter

4 Their recognition is possible in every case

5 In our case, the unilateral duplication had a direct bearing on the progress of the pathologic process

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THE TREATMENT OF GONORRHEAL FOLLICULITIS BY CAUTERIZATION WITH THE D'ARSONVAL CURRENT

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AND
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In July, 1915, Swinburne[1] directed attention to fulguration in the treatment of gonorrheal folliculitis Since October, 1915, we have employed the method suggested by him and desire to record the unusually satisfactory results obtained by this treatment in recurrent and chronic gonorrhea

For many years we have understood the part played by the glands of Littre and the crypts of Morgagni in harboring the gonococci where medication could not reach them Knowing this, however, heretofore has been of small importance because there was no definite, dependable remedy to eradicate the organisms or destroy their foci To Swinburne belongs the credit for evolving a method for the destruction of these protected recesses This can be readily and certainly done by inserting an electrode into the follicle and applying the d'Arsonval bipolar current, this is much more satisfactory to deal with than the Oudin monopolar current. Within from two to ten seconds the follicle and tissue immediately around it have become white, and in about one to three weeks it sloughs away, leaving only a smooth granulating surface which finally becomes covered with epithelium and the follicle no longer exists. The patient's immunity, which was able to eradicate the organisms except in protected recesses, now completes the cure if all the recesses have been destroyed and the adnexa are not infected.

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[20] Furniss Surg, Gynec and Obst, 1914, xviii, 584
[21] Young, quoted by Kelly and Burnam (Footnote 11)
[22] Brown Boston Med and Surg Jour, 1914, clxxi, 373

[1] Swinburne Med Rec, New York July 31, 1915

SELECTION OF PATIENTS

Naturally acute or subacute conditions should not be treated in this manner. There are many patients who remain free from discharge while under ordinary treatment, but who have a relapse when the injections and irrigations are discontinued or after dissipation or coitus. If the prostate and seminal vesicles are eliminated as possible foci, the chances are about twenty to one that infected follicles keep up the inflammation. This is at times strikingly shown by the disappearance or great reduction in the discharge or shreds within one or two days after the cauterization of inflamed pockets. If the persistent discharge and shreds were not caused by these foci of infection, their disappearance after cauterization of the follicles could hardly have been expected to occur. Of course such a prompt improvement many times does not result, though when it does it proves our contention. At times, especially in subacute recurrences, with immunity lowered, the discharge may be made worse by endoscopy and high frequency. Irrigations and injections of mild remedies may be continued, however, just as if the high frequency treatment had not been administered. This will soon control the recurrence if it should develop.

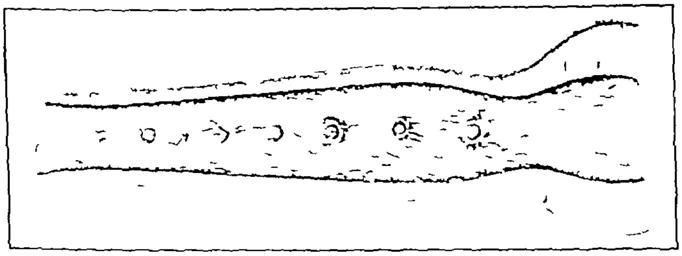

Fig. 1.—Diagrammatic drawing of a segment of the roof of the urethra showing glands of Littre and crypts of Morgagni.

When all the foci have been destroyed, a continuation of mild remedies will then effect a cure without further relapses. It does not seem difficult for Nature to secure immunity to gonococci on a smooth urethral mucosa. Infected follicles provide conditions which are unfavorable for the immunizing processes, especially in chronic infections. This probably accounts for the uncertain results in the treatment of gonorrhea and for the lack of uniformity with vaccine therapy. The average patient is largely immune to gonococci except on mucous and serous surfaces, and even here local immunity can be developed with a fair degree of ease if protected recesses are absent or can be destroyed. In terms of modern warfare, we may say that the organisms may be destroyed without much difficulty by Nature's medical artillery if the infection is not protected in the trenches. The high frequency current is the gonococcal trench destroyer. This becomes readily apparent when an endoscopic examination is made a few weeks after follicles have been cauterized, and at their former sites we find only smooth mucosa. Heretofore chronic and recurrent gonorrhea, even in the hands of experts, did not receive treatment that could be depended on to afford definite results in a very encouraging percentage of cases. We knew the advantage of massage of the prostate, and realized the persistent character of seminal vesiculitis, but many patients who did not have such complications were not infrequently refractory to treatment because of infected follicles. Since Swinburne has suggested to us an effective means of destroying these foci, this former bugbear of medicine can be placed on an accurate scientific basis which will afford results as certain as our judgment is accurate in selecting appropriate cases and directly in proportion to the skill we exercise in detecting and destroying all of the protected recesses. As previously stated, we should not expect this treatment to cure prostatitis and seminal vesiculitis.

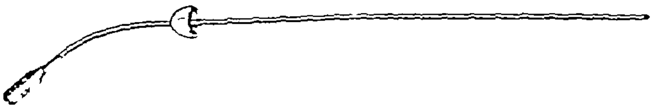

Fig. 2.—Ordinary fulgurating electrode, showing only a small amount of exposed wire beyond the insulation.

Fulguration is of particular value in chronic folliculitis in which there is a beaded condition of the urethral canal, although more frequently recurrent infections result from infected follicles which have not sufficient infiltration to render them palpable.

INSTRUMENTS

The most satisfactory urethroscope both for diagnosis and cauterization is McCarthy's improved cysto-urethroscope. This permits an easy examination and provides a constant flow of cool sterile water. The electrode should be one which may be inserted into the bottom of the follicle and thus cauterize the entire tract. The insulating sheath should extend only beyond the lever for controlling the distal point of the electrode. This kind of an electrode may be made by inserting a silver wire, of about 22 gage, through a urethral catheter. A small bulb may be made on the end of the silver wire by holding it in a Bunsen flame until it melts. Such a bulb on the end of the electrode facilitates its introduction into the depths of the follicle. Some of the early failures were due to the fact that the electrodes used were placed only over the openings of the follicles and not inserted into their depths, as they should have been, for on subsequent examinations the follicles were still present.

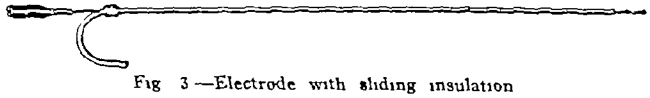

Fig. 3.—Electrode with sliding insulation.

By moving the silver wire up and down through the insulating sheath, the desired amount of exposed electrode may be obtained. The amount of exposure needed, of course, varies with the depth of the follicles to be cauterized. The sheath should be wrapped with adhesive plaster around its proximal end so as to form a bulbous mass to prevent its passing too far into the urethroscope when the wire is advanced. The illustrations show several types of electrodes we have made with silver wire and small rubber tubing A small rubber cap is placed over the electrode to prevent the irrigating solution from spraying on the surgeon's face A rubber band rather tightly applied around the penis just back of the corona will cause good dilation of the urethra without unnecessary wastage of irrigating solution Each follicle is cauterized until it becomes distinctly white

REPETITION OF CAUTERIZATION

The treatment with the high frequency current may be repeated in from two to three weeks, as indicated by the reactions and by persisting manifestations of infected follicles Inflammation of the prostate and seminal vesicles should receive appropriate treatment during this time

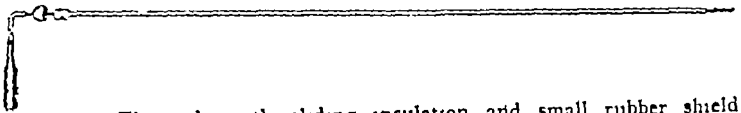

Fig 4 —Electrode with sliding insulation and small rubber shield to prevent the squirting of irrigating solution into the examiner's eye

The following case histories have been selected from fifty-four patients treated with the high frequency current for persisting or recurrent urethritis Some had been treated for as long as six years by a number of physicians and specialists, but the discharge and urethral shreds still continued Two or three treatments were the average required after we learned the importance of inserting the electrode to the bottom of the pocket and to apply the current until the mucosa overlying it turned white A number of the patients returned to their homes and allowed their physicians to continue mild irrigations During the two or three weeks' interval it was most gratifying to note the marked improvement in some of these patients who had for years been unsuccessfully treated by the usual measures Without burdening the reader with the details of many of the histories, we should like merely to say that, in suitable cases, we have never been able to secure such definite and prompt results by any measure or remedy hitherto advised for this class of patients

REPORTS OF CASES

Case 1 —Mr A, with gonorrhea of four months' duration, thought himself cured, and married without examination to determine the absence of gonococci Recurrence developed on the wedding trip before he indulged in coitus with his wife, and he reported for treatment two days later with a slight purulent discharge with many typical intracellular diplococci An examination was made with McCarthy's cysto-urethroscope, and two inflamed glands of Littre were found on the roof of the urethra about 1 inch back of the meatus These were fulgurated until they became white The discharge did not recur after this treatment The urine has since remained clear in spite of alcoholic and sexual excesses

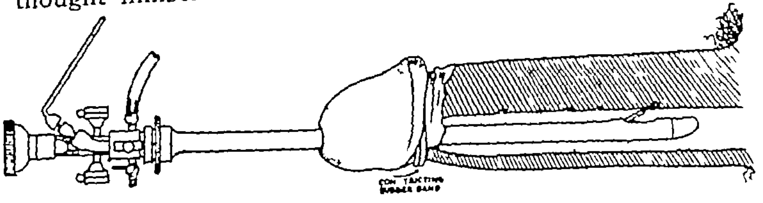

Fig 5 —Sagittal section of penis with McCarthy's water dilating cysto urethroscope in position, with electrode inserted into a gland of Littre ready for fulguration

Case 2 —Mr B, with gonorrhea of four months' duration, thought himself cured three times, but on discontinuation of treatment the discharge would recur Fulguration of six glands of Littre and one lacuna of morgagn in the roof of the urethra caused an increase in the discharge and shreds in the urine for four days Mild irrigations of potassium permanganate soon cleared the urine of pus and shreds There has been no further recurrence

Case 3 —Mr C had had gonorrhea three years ago, but a discharge had been seen more or less constantly in the mornings during this time, and the urine always showed mucous and pus shreds, though no gonococci could be found in the discharge The prostate and seminal vesicles were normal Endoscopy showed five distinctly inflamed glands of Littre These were cauterized with the high frequency current, but the discharge continued though in a smaller quantity for three weeks, when another fulguration treatment was given to two follicles which had been incompletely destroyed Within two weeks the discharge ceased, the urine became clear, and no further relapse has occurred

Case 4 —Mr D had gonorrhea six years ago, and had never been free from discharge since Eight beadlike masses varying in size from a shot to a bean could be palpated along the urethra These were treated by fulguration, there was a prompt reduction in the size of the lumps, though the discharge continued In eighteen days another treatment was given with the high frequency current, and five inflamed indurated follicles were cauterized While the condition was improved, there could still be felt two nodules at the end of three weeks when these were deeply cauterized The urine is now nearly clear, and the morning discharge no longer appears

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THE DURATION OF THE NURSING PERIOD IN WOMEN OF THE UNITED STATES

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It is of interest to know the present average length of breast feeding and to determine any change which has occurred in recent years

Such a study is more readily undertaken because of the paucity of statistics on the subject in this country, and because of the difference of opinion which prevails regarding the increase or the decline of nursing ability in American women This difference of opinion is well illustrated by comparison of the statements of two eminent authorities Holt[1] says "In spite of all effort to the contrary, it is nevertheless a fact that the capacity for maternal nursing is steadily diminishing in this country" On the other hand, Griffith[2] says "The ability to nurse is no longer materially diminishing, provided the woman has been raised and continues under healthy normal conditions These conditions are improving in the upper classes and are not changing for the worse in the poorer" Dr Griffith's statement applies, not only to this country, but to civilized nations in general

It is needless to call attention to the vast importance of such a subject One realizes the great advantage of maternal over artificial feeding, but it is brought home very forcibly by statistics, such as those of Davis,[3] which show that above the age of two weeks the proportion of deaths in bottle-fed babies is six times that of breast-fed babies

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[1] Holt, L E Infancy and Childhood, D Appleton & Co, New York and London, Ed 4 1908, p 168

[2] Griffith, J P C The Ability of Mothers to Nurse Their Children, The Journal A M A, Nov 23, 1912, p 1874

[3] Davis, W H Am Jour Pub Health, 1912, ii, 67

Our task in this matter is clear Many times breast feeding is unnecessarily stopped Most authors agree that in such instances the ignorance of the laity plays an important role, but that this is perhaps secondary to the lack of perseverence of the physician Martin,[4] working in the Midwife School of Stuttgart, found that from 1884 to 1903, of 10,000 mothers, 88 2 per cent nursed, 10 5 per cent partly nursed, and 1 3 per cent did not nurse at all Later they were able to make all the mothers nurse Thorn,[5] quoting Oppenheimer of Munich, says "Of 1,000 mothers, 642 did not nurse, of whom only 31 had valid reason for not performing their maternal duty" Thorn believes that with encouragement, care and proper feeding, 90 per cent of all mothers are able to nurse

In our own studies it will be seen that about 20 per cent of American mothers of a certain class never suckle their offspring One cannot resist the temptation here to plead for a lessening of this number Education of the laity to the advantage of breast feeding and the danger of bottle feeding, proper care of the breast during and after pregnancy, and regulation of the mother's health, habits and diet should help us to encourage and prolong lactation

Many of the German statistics are taken from maternity hospitals Absolutely accurate statistics are available practically only in such institutions, but patients are discharged from them usually at the expiration of ten days or two weeks The problem obviously does not lie here, although it is important to remember that the foundation for successful breast feeding is often determined in this interval It is at this time that the obstetrician might work in conjunction with the pediatrist with profit, and perhaps with some reduction in infant mortality

Pistor[6] in 1894 collected 12,809 cases from the midwife tables in Freiburg, in 24 per cent of which the mothers did not suckle at all Wiedow[6] in 1895 recorded that of 525 women from the Frauenklinik at Freiburg, only one half could suckle after the first two weeks Keller[7] found that about 30 per cent of children were exclusively artificially fed In Hohlfeld's[8] statistics on 5,023 nursing women, 27 5 per cent continued to nurse over six months, and Weiss[9] in his studies on 1,622 cases reported that 25 per cent nursed longer than this period Bluhm,[10] from a review of German literature, concluded that a third of German women nursed sufficiently, somewhat more than a third were physically unable to nurse, and less than a third nursed insufficiently or not at all, from deficiency of intelligence and desire, or because of social conditions

In England, Blacker[11] found that of 1,000 cases taken from the poor, only 2 4 per cent never suckled, while 74 7 per cent suckled their children seven months or longer Fordyce,[12] in 374 deliveries of 100 mothers, stated that 69 per cent of the babies were nursed on the breast wholly or partly for at least two months, the average being ten months, and that the average period of lactation was as long in later as in earlier infants

In this country some of the statistics are of interest Dr Eleanor Jones[13] quotes the studies of Schwartz of 1,500 women, of whom 96 per cent nursed one month or less, 88 per cent three months and 77 per cent six months The result of a questionnaire sent by Sedgewick to married physicians in the United States is also mentioned It reveals that 80 per cent of wives of American physicians succeed in nursing one or more children three months or longer

Koplik[14] found of 1,007 infants, seen in private practice, 56 per cent were breast-fed, and of these, only 40 per cent longer than four months According to Snyder,[15] a study of 1,000 mothers is contained in a recent pediatric work Five hundred were poor and living in tenements, and 90 per cent of these mothers nursed nine months The other 500 mothers were prosperous and lived in healthy surroundings, but only 17 per cent nursed nine months

The value of statistics such as these depends on the number of cases, the memory and intelligence of the mother or person giving the history, and the accuracy with which the history is taken

It is the object of this communication to present an analysis of almost 3,000 cases taken from the records of the Children's Hospital during the last fifteen years As it was the desire to determine as far as possible the ability of the mother to nurse, many cases were excluded It was the duration of the physiologic period of lactation, apart from disease or deliberate act of the mother, which was the problem to be solved Thus, when the records showed that the mother stopped nursing from some such cause as going to work, or lactation was terminated by an acute infection, or mammary abscess, the case was not included

It may certainly be stated, however, that the statistics to be presented show with reasonable accuracy the length of breast feeding in the hospital class of Philadelphia women These women are of different nationalities, including Italian, German, Russian, Irish, Armenian and others Many of them are native-born Americans, and a fairly large percentage consist of Jewish and colored women They therefore should represent the same classes which are found in most of the large American cities, at least along the eastern seaboard

It must also be remembered that many babies admitted to the hospital in the summer are suffering from gastro-enteritis or gastric and intestinal disturbance of some type It is not to be denied that this condition is much more frequent in bottle-fed babies, and that the bottle-fed baby is more liable to acute infections and illness of any nature than the breast-fed baby Reasoning from this, we must come to the conclusion that the average length of breast feeding in babies admitted to the hospital is less than for babies of the same class not admitted to the hospital This statement is made advisedly Consultation with social workers in Philadelphia shows that they seldom encounter mothers who never nurse their children

One must understand that in getting a history of breast feeding the baby has not necessarily been wholly breast fed during the entire period stated, but has been receiving most of its nourishment in this way

From the beginning of 1900 to the end of 1904 there were 734 cases in which the average length of lactation was 5 92 months From the beginning of 1905 to the end of 1909 there were 827 cases with an average of 6 36 months From the beginning of 1910 to the end of 1914 there were 1,258 cases with an average of 5 76 months Therefore, of a total of 2,819 cases during the fifteen years, the average length of lactation was 6 months [10]

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[4] Martin G Arch f Gynak, 1904 1905 lxxiv 513

[5] Thorn Munchen med Wchnschr, 1907 liv 513

[6] Pistor and Wiedow quoted by Blacker, G F Med. Chron 1900 Series 3 ii 323

[7] Keller quoted by Thorn Munchen med Wchnschr 1907 liv, 513

[8] Hohlfeld, M Deutsch. med Wchnschr, 1905, xxxi 1391

[9] Weiss, quoted by Griffith Med Klin 1911 vii 644

[10] Bluhm A. Ztschr f soziale Med Berlin 1907 1908 iii 72, 1(1 261

[11] Blacker G F Med. Chron. 1900 Series 3 ii 323

[12] Fordyce A D Lancet, London 1906 i 221

[13] Jones E Arch Pediat. 1914 xxxi 24

[14] Koplik, quoted by Griffith J P C (Footnote 2)

[15] Snyder J R The Breast Milk Problem, The Journal A M A Oct 10 1908 p 1212

Table 1 shows a study of the statements of 2,819 mothers when questioned regarding the length of time their children were breast fed It is seen that there has been no appreciable decline in the length of maternal nursing in the last fifteen years The rather higher percentage of cases at from 11 to 12 months, from 17 to 18 months and from 23 to 24 months is caused by the fact that here the mothers' statements that "baby nursed a year," "baby nursed a year and a half," and "baby nursed two years," are included

TABLE 1—PERIOD OF BREAST FEEDING IN THE CASE OF 2,819 MOTHERS, EXTENDING OVER A PERIOD OF FIFTEEN YEARS

Period of Breast Feeding, in Months	1900 to 1904 Per Cent	1905 to 1909 Per Cent	1910 to 1914 Per Cent	1900 to 1914 Per Cent
Not breast fed	21 117	18 256	19 713	19 695
1 wk to 1 mo	14 033	14 749	16 136	14 972
1 to 2	9 537	10 035	11 923	10 498
2 to 3	6 948	7 858	5 882	6 896
3 to 4	3 267	2 780	3 338	3 128
4 to 5	2 997	3 022	2 305	2 775
5 to 6	4 632	3 868	2 940	3 813
6 to 7	1 634	1 934	2 146	1 905
7 to 8	2 725	2 539	2 146	2 470
8 to 9	3 133	2 781	2 305	2 739
9 to 10	2 129	1 692	1 669	1 841
10 to 11	1 362	3 022	1 510	1 965
11 to 12	7 094	8 342	8 982	8 136
12 to 13	1 909	2 901	1 826	2 212
13 to 14	1 908	4 473	2 225	2 865
14 to 15	3 267	2 418	2 146	2 610
15 to 16	1 498	1 088	1 510	1 365
16 to 17	0 954	0 605	1 258	0 939
17 to 18	5 177	4 715	5 087	4 993
18 to 19	0 545	0 249	0 556	0 450
19 to 20	0 817	0 249	0 715	0 593
20 to 21	0 545	0 121	0 476	0 381
21 to 22	0 408	0 121	0 318	0 282
22 to 23	0 136	0 121	0 159	0 138
23 to 24	1 908	1 572	2 702	2 061
Over 24 mo	0 272	0 487	0 397	0 385

It will be perhaps more clearly shown, especially in comparison with other statistics, if the fifteen years' average is put in a different way These averages are shown in Table 2

TABLE 2—PERIOD OF NURSING IN THE CASE OF 2,819 MOTHERS, SHOWN IN AVERAGE PERCENTAGES, COVERING A PERIOD OF FIFTEEN YEARS

Average Percentage	Period of Nursing, Months	Average Percentage	Period of Nursing, Months
19 69	Did not nurse	19 23	13 or longer
80 31	1* or longer	17 02	14 or longer
65 34	2 or longer	14 16	15 or longer
54 85	3 or longer	11 55	16 or longer
47 96	4 or longer	10 19	17 or longer
44 84	5 or longer	9 26	18 or longer
42 07	6 or longer	4 27	19 or longer
38 26	7 or longer	3 82	20 or longer
36 36	8 or longer	3 23	21 or longer
33 89	9 or longer	2 85	22 or longer
31 16	10 or longer	2 57	23 or longer
29 32	11 or longer	2 44	24 or longer
27 36	12 or longer	38	Nursed over 24

* One week

If it is borne in mind that we are studying the statements of the poorer class of city women, we may be justified in drawing the following conclusions

1 There has been no decline in breast feeding in the last fifteen years

2 The women of the poorer class compare favorably in the period of lactation with the women of the more prosperous class in this country

3 The women of this country compare favorably in the period of lactation with European women

4 The average period of lactation in children entered at the hospital was six months

5 Twenty per cent of the women did not nurse their children, 80 per cent nursed one week or longer, 55 per cent nursed three months or longer, 42 per cent nursed six months or longer, 34 per cent nursed nine months or longer, 27 per cent nursed a year or longer, 9 per cent nursed eighteen months or longer, and 2 per cent nursed two years

6 For the reason previously pointed out, namely, the greater susceptibility of artificially fed babies to gastro-intestinal and nutritional disturbance, the infants brought to the hospital were, in the large majority of cases, bottle fed at the time of their entrance there The conclusion is inevitable that the figures given represent the minimum of lactation

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16 In presenting these statistics, I realize they are open to criticism because they include the extremes The average includes all cases

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THE ETIOLOGY OF TYPHUS FEVER IN MEXICO (TABARDILLO)

PRELIMINARY COMMUNICATION *

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BERNARD S DENZER, M D
AND
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The work covered by this report was begun in February, 1916, in Matehuala, Mexico, and was interrupted in the early part of March because of the necessity of Americans leaving that country Studies were made of the blood of typhus fever patients to determine whether an organism could be recovered, and, if so, whether it conformed with the organism described by Plotz, Olitsky and Baehr[1] in the blood of endemic typhus fever patients in New York and in cases of typhus fever in Serbian immigrants quarantined in New York harbor The blood of the patients when injected into guinea-pigs gave the characteristic typhus reaction The first three blood cultures were made in a medium containing 0 5 per cent glucose, and an organism was recovered in one case Cultures were made in twenty-eight cases with a 2 per cent glucose medium, which is the sugar concentration used in the earlier work in New York Of the latter cultures only eight could be observed a sufficiently long time, and in all of them the same organism was found

The organism is an obligate anaerobic gram-positive bacillus which in morphology and cultural characteristics, including acid production in various carbohydrates, is identical with the *Bacillus typhi-exanthematici* The injection into a guinea-pig of a colony taken directly from the blood culture tube proved the organism to be pathogenic Agglutination tests performed with serums taken in different stages of the disease showed negative results during the early part of the illness, an occasional positive reaction at or near the crisis, and uniformly positive results after the crisis

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* From the Pathological Laboratory, Mount Sinai Hospital

* March 20, 1916, shortly after the departure from Mexico, Dr Husk succumbed to an attack of typhus fever contracted in the prosecution of this work.

* This work was carried out with the aid of a donation made by a number of the directors of the Mount Sinai Hospital and the George Blumenthal, Jr, Fellowship in Pathology We wish to express our indebtedness to the officials of the American Smelting and Refining Company, whose cooperation enabled us to undertake the work

1 Plotz, Olitsky and Baehr Jour Infect Dis, 1915, xvii, 1

In cultures made from lice taken from the clothing of typhus fever patients, the same organism was obtained The injection of lice into guinea-pigs produced a febrile reaction, and at necropsy the characteristic splenic lesion was found In cultures from the spleen, an organism was recovered showing the morphologic characteristics of the *Bacillus typhi-exanthematici*, but on account of the sudden termination of the work, the organism could not be further studied

ELECTIVE LOCALIZATION IN THE BRONCHIAL MUSCULATURE OF STREPTOCOCCI

FROM THE SPUTUM OF CASES OF BRONCHIAL ASTHMA PRELIMINARY REPORT

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According to the work of recent investigators and observations of clinicians, it has become evident that the phenomena observed in an attack of bronchial asthma are fundamentally due to a tonic spasm of the bronchial musculature Just what is the cause of the spasm is still a matter of conjecture Recently Koessler[1] has reported the finding of a fusiform anaerobic bacillus in the sputum of asthmatic patients which he regards as possibly specific, the evidence being mainly its presence in a large number of cases He also reports the success of vaccine treatment, which has been especially marked in the cases in which this organism was present in the sputum The sputum in these cases has, however, contained certain other organisms, notably the pneumococcus, *Streptococcus hemolyticus* and *Streptococcus viridans* As further evidence of the bacterial origin of the disease is the presence in a large percentage of the cases of associated lesions, particularly of the nasal passages, which strongly suggests a primary focus of infection The removal of such a focus has often caused a marked improvement in the condition of the patient

The foregoing evidence suggested to me the possibility of the reproduction of the disease in lower animals by the intravenous injection of cultures of the sputum of asthmatic patients The reproduction of Rosenow has shown repeatedly, and in a great variety of pathologic conditions, that bacteria (streptococci) display an elective affinity for certain tissues In our work on herpes zoster[2] we have shown that streptococci isolated from the tonsils, the pyorrheal pockets, the spinal fluid and the sputum of cases of herpes zoster have an elective affinity for the posterior root ganglia The technic employed in these experiments was essentially the same as that used in the experimental work cited above

The three cases thus studied were selected to represent different types and stages of the disease In the first case, a man, aged 39, has had asthma of a particularly severe type for seventeen years, and there is also present a marked bronchitis with profuse expectoration The second patient has asthma of rather short duration (three years), and the lung changes, except during the active stage of the disease, are comparatively slight The third case is of twelve years' standing, but is of the remittent type, and the sputum was collected during the latent stage As an illustration of a case history, that of Case 1 is given in more detail

Case 1—H B, man, aged 39, referred to me in January, had had asthma since he was 22 Prior to that time, since the age of 14, he had coughing spells every night He had croup during the first year of life, when 11 years of age he was taken to a doctor to be treated for "catarrh in the head" The attacks of asthma came on very suddenly, the patient remembers distinctly the first night when he had an attack. After that he had an attack some time during each twenty-four hours, usually after the evening meal, but the time of attack varied, showing a marked tendency to continue at the same time of the day for periods of two weeks or more This condition continued for many years At one time the patient sought relief by change of climate, going to northern Texas, which brought temporary relief, but after one month in that locality he says he was just as bad as ever The attacks have never seemed to be influenced as regards onset by any external factor, psychic or otherwise His father's father and two of his father's sisters had asthma, two sisters had had attacks of croup during childhood, and one brother died of tuberculosis at an early age

At the time the patient came to my office he was suffering from frequent and severe attacks of asthma, and also had a marked bronchitis with profuse expectoration The temperature ranged between 99 and 101 5 There was no active lesion to be found in the nasal passages, but the inferior and middle turbinates had been removed several years before. Over both lungs were sibilant and sonorous râles, of the vague character commonly present in advanced cases of bronchial asthma The cardiac and hepatic dulness were almost obliterated by the resonance of the distended lungs There were no cardiac murmurs, and beyond these chest findings the examination was practically negative Cultures were made from the carefully washed sputum and a vaccine prepared directly from the ascites-dextrose-broth culture After the first dose of vaccine the patient had a violent reaction with chills and marked rise of temperature Since the beginning of the vaccine treatment he says "he has never had an attack of asthma" The bronchitis has persisted, however, although to a less degree, up to the present time

No attempt was made to isolate any particular type of organism Great pains were taken, by gargling and repeated washing of the sputum in sterile salt solution, to avoid mouth contamination, cultures being then made in ascites-dextrose-bouillon, and the twenty-four hour culture centrifuged and injected in varying amounts intravenously

Of the twenty-one animals injected, all except three have shown typical lung lesions In the three exceptions, the animals injected with the same strain from a twenty-four hour culture of lung tissue died a few hours later with an overwhelming septicemia All of the other animals lived until chloroformed, which time varied from forty-eight hours to two weeks after injection After the first twenty-four hours after injection most of the animals seemed to feel fairly well and would take nourishment A distinct difference was invariably observed, however, in the manner of breathing, the respirations being markedly reduced in rate as compared with control animals, and intensely labored. Squeaking râles could be heard with the stethoscope, and in one of the rabbits there was an audible wheezing during expiration Several of the animals would at times hold the head high in the air as if suffering from air hunger At necropsy the lungs were found to be greatly distended, filling the chest cavity They were in most of the animals of a dull grayish color, at times mottled brownish plaques In some, however, in which large doses had been injected, the lungs were distinctly hemorrhagic and showed considerable infiltration, mingled with the emphysematous areas, in microscopic section The grayish looking lungs were extremely light in weight, the smallest particles floating in water Pressure elicited distinct crepitation, and all other signs of emphysema were present On microscopic examination the main changes in these lungs were found to be A marked distention of the alveoli, and a thinning and often rupture of the alveolar walls The blood vessels were engorged and there was considerable perivascular round cell infiltration A very marked change was seen in the bronchioles These were contracted as if in spasm, and the mucosa was thrown into folds which almost completely obliterated the lumen In the peribronchial tissue there were small areas of hemorrhage and marked round cell infiltration In the substance of the musculature a considerable number of streptococci were found, usually lying between the muscle fibers and toward the inner margin of the muscle wall In this connection may be mentioned an interesting observation in the animals injected from the sputum in Case 3 Here the sputum culture was largely composed of a short, plump, polar-staining bacillus, and very few streptococci were present But tissue cultures of the lungs made forty-eight hours after injection showed a pure culture of streptococci, while stains of the lung tissue showed streptococci present in the musculature, just as in the animals injected with cultures from Cases 1 and 2, in which almost pure cultures of streptococci were present

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[1] Koessler K K and Moody A M Etiology of Chronic Bronchitis with Special Consideration of Those Forms Associated with Bronchial Asthma abstr, The Journal A M A March 27 1915 p 1104

[2] Rosenow E C and Oftedal Sverre The Etiology and Experimental Production of Herpes Zoster Jour Infect. Dis 1916 xviii, 477

Cultures were made of the blood and other body fluids, and also of several of the other organs besides the lungs in order to disprove the possibility of a generalized bacteremia In nearly every case the blood and all organs except the lungs were found to be sterile, while the lungs yielded a pure culture of streptococcus One rabbit was kept for two weeks, being injected every two days with twenty-four hour cultures from the sputum in Case 1 Here the lungs were found to be markedly emphysematous, while some areas, especially around the larger vessels and bronchi, showed a marked tendency to atelectatic compression Cultures from the lung tissue showed *Streptococcus viridans*

As regards the morphology of the organisms, both the hemolyzing and green-producing streptococci were found, while in one case a pure culture of *Streptococcus mucosus* was obtained from the lung tissue

The amount of hemorrhagic infiltration associated with the emphysema in these cases seemed to depend largely on the dosage of the organisms injected Thus it was found that by injecting the growth from 1 ounce of a twenty-four hour culture of the sputum in Case 1 the typical and almost uncomplicated condition of emphysema could be produced repeatedly

From an analysis of these findings, associated with a systematically studied history and examination of a considerable number of cases, it seems evident that the sputum of at least a large number of persons suffering from bronchial asthma contains organisms (streptococci) which have an elective affinity for the bronchial musculature and that the invasion of the lungs by these organisms, when made possible by any factor, psychic or otherwise, which tends to lower the resistance of the individual, will bring about a tonic spasm of the muscles of the bronchioles and cause the typical phenomena so commonly observed clinically in patients suffering with an attack of asthma In other words, these experiments illustrate another example of elective localization of streptococci There are no doubt a number of factors which must be taken into consideration I would particularly emphasize a hereditary predisposition to weakness of the respiratory tract In nearly all of the cases studied there is a family history of asthma or other respiratory tract disease Many of the cases give a history of spasmodic laryngitis (catarrhal croup) during childhood, which strongly suggests a congenital lack of resistance, manifesting itself as bronchial asthma later in life with the development of a focal infection, or a weakening disease of the lungs, such as an attack of acute bronchitis

MERCURIC CYANID POISONING WITH RECOVERY *

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Poisoning by mercuric cyanid is a rare occurrence The case here reported is of interest because of the hopeless prognosis, subsequently followed by complete recovery, and the unusual opportunities at hand for making chemical and physical analyses of blood and excreta for a period of a month and a half

History—A German girl, aged 20, attempted suicide on the afternoon of Aug 1, 1915, by entering the cabinet of the physician by whom she was employed as domestic, and taking therefrom one tablet from a bottle marked "Gift" Subsequently this was proved to be mercuric cyanid in 0 5 gm (7½ grain) tablets She was not found until several hours later, and then promptly brought to the hospital by an ambulance

Clinical Course—On admission to the hospital she was in a state of partial collapse, she responded well to stimulation, and was lavaged with a copious amount of potassium permanganate (1 1,000 solution), the vomiting and nausea continuing We are not certain of the immediate action of the poison, as it was quite impossible, on admission, to get from her any description of the early symptoms On several occasions later she said that as far as she knew, she had suffered no convulsions or loss of consciousness, but remembers only vomiting violently from the very first

Twenty-four hours after ingestion of the poison, the patient had a general convulsion, vomiting continued and bowels were loose, the urine was "q s"

On the third day a rash was present over the face and arms, no urine was observed on this day, but may have been voided with the stools, which were very loose and frequent

On the fourth day the mouth was sore The patient was salivated She was drowsy and stupid Vomiting continued No urine was passed for twenty-four hours, a catheterized specimen was less than half an ounce

On the fifth day the breath was fetid, the tongue swollen, the gums ulcerated The patient was in coma most of the time There was incontinence of feces Phenolsulphonephthalein was injected, but no urine was recovered at the end of the first and second hours by catheter

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On the sixth day phlebotomy was done, 15 ounces being withdrawn On this day the patient passed 2 ounces of urine after fifty hours' complete retention The vomitus was green The patient complained of headache

On the seventh day the patient was menstruating The bowels were very loose, and there were abdominal pain and tenderness

From the eighth to the twelfth days the urine increased in quantity daily and was now 15 ounces Vomiting was persistent

From the thirteenth to the nineteenth days the vomitus was bloody The urine amounted to about 24 ounces daily

On the twenty-third day the vomiting had stopped The phenolsulphonephthalein test revealed 12 per cent in two hours

On the twenty-ninth day the appetite was improving

On the thirty-first day the patient was out of bed for half an hour She was given a soft solid diet She had lost 20 pounds

On the thirty-eighth day she was about the ward most of the time, and was very cheerful

On the forty-fifth day she was well, and was discharged to court for trial

Throughout her stay in the hospital, pulse, respiration and temperature ranged within normal limits, except during the temporary periods of coma, convulsions, etc

CHEMICAL AND PHYSICAL ANALYSIS OF BLOOD

Day of Disease	Non protein Nitrogen*	Urea Nitrogen†	Sugar‡	Refractive Index§	Freezing Point	Remarks
2	40¶	24¶	125¶	17 58	—0 573 C	Convulsion no retention
4	292	270	99	14 98	—0 601	Drowsy retention 24 hrs
5	288	263	148	14 61		Coma retention 50 hrs
10	205	174	69	14 01	—0 609	Urine increasing daily
17	162	123		16.84	—0 625	Bloody vomitus
23	195	172	81	18 47	—0 660	Stopped vomiting
31	172	154	74	15 36	—0 772	Improved patient up ½ hr
38	65	51	64	16 58	—0 611	About ward cheerful
45	45	24	76	17 68	—0.579	Discharged

* Method of Folin and Denis (Jour Biol Chem 1912 xi 527)
† Method of E K Marshall (Jour Biol Chem 1913 xv 487)
‡ Method of Lewis and Benedict (Jour Biol Chem, 1915 xx 61)
§ Zeiss immersion refractometer $\Delta Nd \times 10^3$
¶ Milligrams per hundred cubic centimeters of blood

Urinalysis—Blood and albumin were present in the urine for the first fifteen days From then on there was no blood, and albumin was present in decreasing amounts On the day of discharge only a very faint trace was present

Treatment—Gastric lavage was performed on admission and the first day thereafter The bowels were kept open by small doses of magnesium sulphate given in water at frequent intervals Hot packs and high hot colon irrigations were administered regularly to aid elimination and as a general tonic Cerium oxalate 2½ grains was given every four hours, but failed to control the vomiting, which persisted, notwithstanding for twenty-three days Nutritive enemas (eggs, milk and sugar) were resorted to when the vomiting was particularly severe The patient was on a milk diet the first thirty days, and fluids were forced in the form of lemonade, cracked ice and water The stomatitis was relieved by frequent gargling with potassium chlorate solution

Toxicologic Findings—The vomitus, stomach washings urine and feces of the twenty-four hours after admission were analyzed for poison In the combined lavage and vomitus, both the mercury and the cyanid were easily detected The urine and the feces showed the presence of mercury, but no cyanid, the latter evidently being destroyed *in passing through the organism* Analysis of the feces on the sixth day showed mercury present in traces only The blood which was removed on this day (450 c c) was also analyzed for poison Before starting on this venture, we knew that if any were present, it must be an extremely minute quantity, and therefore from the beginning the greatest care was applied in its detection The most delicate method possible was used[1], the blood was decomposed and brought into solution in the usual way by the use of previously tested mercury free reagents, potassium chlorate and hydrochloric acid The mercury was then deposited on a thin strip of gold by means of the electric current, carefully washed, dried and placed in a glass tube previously drawn out to a capillary at one end, the hydrogen generator being attached to the other end After pure hydrogen had been passed through very slowly for half an hour, the tube containing the gold foil was carefully heated, volatizing the mercury, which was then carried along in the slow stream of hydrogen and deposited on the cold drawn out end of the tube With a strong lens, a few microscopic globules of metallic mercury were visible, which with iodin gave the red iodid of mercury reaction

The combined feces, urine and vomitus of the sixteenth day were analyzed and found to contain no mercury

Spectroscopic examination of the blood on the first day revealed no evidence of cyanhemoglobin

COMMENT

Anuria began on the third day and lasted two days, the patient then being in typical uremic coma and presenting the characteristic picture of severe mercurial nephritis The prognosis was extremely grave and a fatal termination was to be expected, from experience in poisoning with mercuric chlorid, in which recovery is extremely rare after onset of profound uremic coma and anuria

Blood Findings—The nonprotein nitrogen of the blood increased steadily with the urinary retention The surprisingly high figure of 292 mg per hundred c c of blood (the normal is from 35 to 45) was obtained Although higher figures have been reported in the blood, this observation is of interest because of the subsequent recovery after so severe a degree of retention In our previous experience all cases which presented values of 200 mg or above terminated fatally

The cryoscopic figures are noteworthy From the normal average of —0 560 C the depression of the freezing point was gradual as the blood retention increased From the tenth day on, when the urinary excretion was increasing daily, the freezing point determinations were found to decrease steadily, the greatest depression being noted twenty-one days thereafter, namely, —0 772 on the thirty-first day This would appear to us to indicate that the kidneys in resuming their function regained their water excretory power more rapidly than that of the crystalloids, retention of which caused the very low freezing point

Chemical—The toxic action of mercuric chlorid on the kidney is due to the positive Hg^{++} ion, while potassium cyanid exerts its extremely rapid lethal properties (acute respiratory death) through its negative CN^- ion Mercuric cyanid, $Hg(CN)_2$, contains both of these, and *a priori* one would expect it to have the combined effect of the two However, its toxic action resembles that of the chlorid and not that of the cyanid salt, as indicated by the clinical course of this case, which resembles strongly that of poisoning with mercuric chlorid (with the possibly notable exception of a single convulsion on the second day) This action of mercuric cyanid may be due either to its small degree of ionization, or to the isometric structure, $Hg(NC)_2$, which has been ascribed to it by some authorities

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[1] Wolff C H Repertorium der analytischen chemie 1883 iii 114

NOTES ON GRIP EPIDEMIC IN CHICAGO

A M MOODY, M D
AND
J A CAPPS, M D
CHICAGO

The epidemic of grip seems to have spent its force in the months of December and January Only sporadic cases have occurred since then It is highly desirable that the records of this epidemic in various communities should be compiled as completely as possible by all those who have given the subject special study Already valuable reports have come from the New York Department of Health, the Memorial Institute for Infectious Diseases of Chicago, and from the United States Public Health Service The health departments, however, are handicapped by the fact that grip is not generally reported as a contagious disease This places the greater responsibility on individual physicians who have had opportunity to observe many cases In this spirit we desire to publish our data

The frequency of the disease in private practice is not easy to determine without an extensive house to house canvass In the absence of any large statistics, we submit the number of cases occurring in four institutions in which written records were kept of the clinical diagnosis

OCCURRENCE OF CASES

	No Persons	Grip Cases	Percentage Morbidity
Michael Reese	140	27	19
Illinois Training School for Nurses	275	24	9
O'd Men's Home	112	69	61
St Luke s Hospital Nurse s Training School	150	24	16
Total	677	144	21

Nearly all of the 144 grip patients here referred to were unable to report for duty There were many others with colds who remained on duty and were not included in the table

The leukocytes were estimated in fifty-three cases of grip, several counts being made in many of the patients

Thirty cases had a leukocyte count of 10,000 or less Many of these showed a leukopenia

Sixteen cases had a leukocytosis of from 10,000 to 15,000

Seven cases had a leukocytosis of 15,000 or more

From these figures it is seen that leukocytosis is usually absent, although temperature of from 1 to 3 degrees above normal was the rule

In thirty-one cases careful bacteriologic cultures were made on blood agar plates with the following results

Streptococcus hemolyticus occurred thirty-one times

Streptococcus viridans and the pneumococcus occurred thirty-one times

Streptococcus mucosus occurred once

Hemolytic staphylococci occurred nineteen times

Influenza bacilli occurred two times

Friedländer's bacillus occurred two times

Micrococcus catarrhalis occurred once

The streptococcus was the most constant organism present, usually accompanied by the pneumococcus

The influenza bacillus was rarely found, and then only in small number, although in some of the cases cultures were made early in the disease, when they are most likely to be found It seems to us improbable, therefore, that the influenza bacillus played an important rôle in the epidemic

St Luke's Hospital Laboratory—122 South Michigan Ave

PRESCRIPTION WRITING IN ENGLISH*

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CHICAGO

In the report of medical curriculum of the Council on Medical Education of the American Medical Association, the following position is taken by the Subcommittee on Prescription Writing concerning the use of Latin [1]

> The committee considers Latin desirable for the names of ingredients (inscription), indifferent as to the directions to the dispenser (subscription), and objectionable as to the directions to the patient (signature) The student should, however, know the meaning of the Latin phrases which are commonly used This amount of Latin may be readily taught in the course, so far as this subject is concerned

While this report was not acted on by the Council, it may be considered the most recent authoritative statement in this matter It commits us to the use of Latin in at least a portion of the prescription

The arguments advanced in favor of Latin prescription writing are as follows

> 1 "The Latin names of drugs are more definite, concise and unchangeable"
>
> 2 "A Latin prescription can be compounded all over the civilized world"
>
> 3 "Latin prescriptions are used internationally in medical literature"
>
> 4 "It guards the patient against knowledge that might be prejudicial (*a*) as to the physician's intention, (*b*) as to greater ease in securing the prescribed drug without a prescription, with possible formation of habit or other detriment"
>
> 5 Better form is preserved "To encourage the use of English official names would easily lead to the use of unofficial English, or common names, which often are indefinite, less pains would be required in mastering the art, and the results would be probably greater laxity in prescribing and less familiarity with the official substances"

Let us analyze these arguments

1 The first reason advanced cannot stand, as the *English official names for drugs and preparations are just as definite and concise as are the Latin names,* and the latter are no less changeable, as is evidenced by the changes in the official names occurring at pharmacopeial revisions We must not confuse, in this connection, the English *official* names, which are given in the pharmacopeia alongside of the official Latin names, with the common English names, or synonyms, such as Paregoric, Hoffmann's anodyne, Epsom salt, golden seal, Indian hemp, etc, which often are given in the pharmacopeia after the official English name

2 As to the second reason, it may be considered very *doubtful whether it is ever desirable for a patient traveling abroad to have a prescription refilled without medical supervision* Even when the patient stays at home, indiscriminate refilling of prescriptions is not desirable When the patient travels, there is added the lack of international uniformity of strength of preparations (excepting in the case of some of the poisonous medicaments) that might lead to undesirable results, if a prescription calling for a U S P preparation were filled with a preparation of another pharmacopeia having the same or similar name, but a different strength

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* From the Pharmacologic Laboratory, University of Illinois, College of Medicine

[1] Report of Subcommittee on Pharmacology, Toxicology and Therapeutics Section 4 of Report of Committee on *Standard Curriculum for Medical Colleges*, American Medical Association, p 7

That there is a considerable disparity in the strength of preparations of various pharmacopeias may be seen from the few examples given in Tables 1 and 2 That there are not only differences in strength, but even qualitative differences in composition, may be seen from the fact that the compound infusion of senna contains magnesium sulphate in the United States and British pharmacopeias, and potassium and sodium tartrate in the German and various other continental pharmacopeias There is also a considerable difference in the use of correctives, but, most of all, a decided difference in strength the United States preparation representing, for instance, 6 per cent of senna, while the Austrian preparation represents 12 per cent Fancy the predicament of a traveler who buys his compound effervescing powders or compound infusion of senna in different countries, he is doomed to either disappointment or discomfort With troches of santonin, wine of colchicum, tincture of lobelia, or fluidextract of nux vomica, the result might easily be worse

TABLE 1 —STRENGTHS OF PREPARATIONS IN VARIOUS PHARMACOPEIAS GIVEN IN PERCENTAGE OF ACTIVE INGREDIENT

	U S	German	British	Others
Liquor sodii hydroxidi	5	15	20 0	
Oleum phosphoratum			1 0	0 1*
Syrupus ferri iodidi	5	5	5 0	0 5‖
Spiritus aetheris nitrosi	4		1 52 to 2 66	
Fluidextractum nucis vomicae strychnin	1 0		1 5	
Tinctura lobeliae	10 0		20 0	
Tinctura iodi	7 0	10 0	2 5† 10 0‡	
Unguentum sulphuris	15 0	33 0	10 0	
Vinum colchici	10 0§		20 0¶	
Vinum ipecacuanhae	10 0		5 0	

* Austrian
‖ French
† Mitis.
‡ Fortis
§ Seed
¶ Corm

TABLE 2—STRENGTH OF PREPARATIONS EXPRESSED AS AMOUNT OF ACTIVE INGREDIENT PER UNIT DOSAGE FORM

Trochisci santonini	0 01 French 0 03 U S 0 06 British
Pulvis effervescens compositus	7 5 German U S and British 10 0 Austrian

The one prescription in a hundred thousand or perhaps a million that is carried abroad and filled there should not only be translated into the pharmacopeial language of that country, but also revised, so as to be correct as regards the strength of the preparations of that pharmacopeia

TABLE 3 —OFFICIAL LATIN NAMES IN UNITED STATES PHARMACOPEIA AND IN FOREIGN PHARMACOPEIAS

Liquor calcis	Aqua calcariae—German
Kaolinum	Bolus alba—German Austrian etc
Plumbi carbonas	Cerussa—German
Cinchona	Cortex chinae—German, Austrian etc.
Oleum morrhuae	Oleum jecoris aselli—German etc.
Oleoresina aspidii	Extractum filicis liquidum—British
Ergota	Secale cornutum—German
Nux vomica	Semen strychni—German etc.
Santonica	Flores cinae—German etc.
Cambogia	Gutti—German, etc
Hexamethylenamina	Hexamina—British
Hydrargyri chloridum mite	Hydrargyrum chloratum—German
Hydrargyrum ammoniatum	Hydrargyrum praecipitatum album —German
Aqua hydrogenii dioxidi	Hydrogenium peroxydatum solutum. —German
Potassii chloras	Kalium chloricum—German etc
Sodii chloridum	Natrium chloratum—German etc.
Oleum tiglii	Oleum crotonis—German etc
Ace phenetidinum	Phenacetinum—German etc.
Antipyrina	Phenazonum—British
Benzosulphinidum	Glusidum—British Saccharinum—German Austrian
Potassii bitartras	Tartarus depuratus—German
Potassii et sodii tartras	Tartarus natronatus—German
Antimonii et potassii tartras	Tartarus stibiatus—German

3 International use of Latin in medical literature would be an argument of some importance in favor of Latin prescription writing, but, as can readily be shown, the *Latin names of drugs are far from being international* Examples are given in Table 3 -

Any one who reads and understands English well enough to study English literature would surely have no difficulty in understanding a prescription written in English Should other nations retaliate by using their language instead of Latin, that would hardly require a greater knowledge of the foreign tongue than would be needed for the use of the literature of that language Should, however, the other nations persist in the use of Latin, the knowledge needed to translate these prescriptions into English would be much more easily acquired than the ability to write Latin prescriptions correctly In point of fact, however, as one looks over current literature, in various languages, one finds very few Latin prescriptions Generally, whenever medicines are mentioned, in German, French or English literature, dosage and method of administration are discussed in the language in which the article is written and not in Latin

4 Inasmuch as it is the popular opinion that doctors use Latin in prescription writing to keep the laity in ignorance for selfish ends, it seems high time that we antagonize this idea, and we can do this most emphatically by using English This we can also do with perfect safety, for *secrecy is very rarely, if ever, essential* in the practice of the up-to-date physician, who generally prefers to take his patient into his confidence than to keep him in ignorance Deception is not practiced by the true physician Therein lies the special difference between the quack and the honest medical man Furthermore, Latin prescription writing does not really contribute much more to secrecy than the use of English, for the *Latin and English official terms for drugs and preparations are often identical, generally very similar to each other* So similar are they, that certain books on prescription writing advocate the use of synonyms, as pulvis Doveri, liquor Fowleri, etc, when it is undesirable in the patient's own interest for him to become acquainted with the treatment When it is stated that self-medication might be encouraged by the use of English, I fail to see the force of the argument Is the patient more likely to call for sodium bromid at the drug store when it is written “sod brom,” standing for sodium bromid, than when it is intended to read “sodii bromidi”?

ILLUSTRATIVE PRESCRIPTIONS

Prescription in Latin	Prescription in English
gm vel c c	gm or c c.
℞ Ammonii chloridi 5	℞ Ammonium chloride 5
Syrupi ipecacuanhae 8	Syrup of ipecac 8
Aquae q s ad 60	Water to make 60|0
Misce et fiat solutio	Mix and make solution
Signa Teaspoonful in water every two hours	Label Teaspoonful in water every two hours.

Prescription in Latin	Prescription in English
gm vel c c.	gm or c c
℞ Hydrargyri chloridi mitis |06	℞ Mild mercurous chloride |06
Sacchari lactis 2	Sugar of milk 2
Misce et divide in chartulas x.	Mix and divide into ten powders
Signa One every hour	Label One every hour

Prescription in Latin	Prescription in English
gm vel c.c.	gm or c c.
℞ Morphinae sulphatis	℞ Morphine sulphate
Extracti belladonnae ana |12	Ext of belladonna each |12
Olei theobromatis 24	Oil of theobroma 24
Misce et divide in suppositoria xii	Mix and divide into twelve suppositories
Signa One every four hours, as needed.	Label One every four hours as needed

That, with few exceptions, the use of English gives the patient no more and no less information than the use of Latin, may be seen from the accompanying illustrative prescriptions

In respect to the fifth reason, all that seems to be necessary is to call attention to the fact that the time allotted to the teaching of pharmacology and therapeutics is extremely limited, actually insufficient to teach the essentials Is it not reasonable to suppose that a conscientious teacher, freed of the necessity of burdening his course with the teaching of Latin forms, would have more time to spare for the more important facts in connection with prescribing? Surely, making a subject more complicated does not lead to a better mastery of it

It has been my experience that the teaching of Latin prescription writing makes it difficult to get *into* the students minds the really *important* facts about prescribing, namely, the "art of prescribing," or more specifically, the "technic of medication," which has nothing to do with the language used This is a matter that is not sufficiently studied by medical students or practitioners, and it is not improbable that focusing attention on the mere language of the prescription causes the really important question relating to the most efficient and most pleasant administration of the remedy frequently to be lost sight of

It is true that students now come to us with better preliminary training than was formerly the case, it is also true, however, that even a professor of classical Latin would have to learn our prescription "Latin" almost as if he had not studied Latin before, for the Latin of prescriptions consists essentially of Latinized modern terms One can find but few of them in a dictionary of classical Latin

That the teaching of Latin prescription writing has so far contributed but little toward the preservation of good form will be admitted by any one who has had experience behind the prescription counter An investigation[2] which I conducted on the quality of prescription writing in this country, to which 100 leading pharmacists in various sections of this country contributed and which represented an examination of 10,000 prescriptions, showed that less than one half of all prescriptions are written in correct Latin form, 36 per cent of all prescriptions being written in English and 18 per cent in poor Latin If there is any error in this compilation — and it must be admitted that modern pharmacists generally have merely a knowledge of what might be called "prescription Latin," it is likely to be in the way of overlooking minor errors in Latin, so that probably much less than half of all prescriptions are written in correct Latin form — surely a poor showing for the time and energy invested in teaching Latin prescription writing

Even the Latin prescriptions published in current medical literature, in periodicals as well as in textbooks, including those published in some books on prescription writing, contain enough errors to make their authors blush were they pointed out to them Would it not be better to have prescriptions written in correct English than to have them written in the slipshod and at times ridiculous way in which so many of them are written at present?

While, therefore, none of the arguments in favor of Latin prescription writing can be said to be irrefutable, a number of arguments in favor of English prescription writing deserve consideration

1 The Roman numerals, especially I and L (standing for 1 and 50) are apt to be mistaken for each other, while our common numerals are much more distinct from each other in appearance (E G Eberle)

2 Few of us are sufficiently versed in Latin to be able to express directions to the pharmacist that are in any way unusual Even if we were capable of writing such directions in Latin, not one druggist in a hundred would be able to understand them Unusual directions to the pharmacist are, therefore, generally written in English, even in Latin prescriptions, which, though endorsed in the committee report quoted above, is really less correct than using either language throughout

3 New drugs are continually being introduced, the coining of the Latin names for which is an embarrassment to the prescriber

4 It is probable that the fear of making mistakes in the Latin form is one of the contributing causes to that therapeutic abomination, the prescribing of readymade official or proprietary mixtures *Latin prescription writing absolutely stifles originality in prescribing*

5 After all, the whole proposition of writing prescriptions in Latin is a pretense at a knowledge of Latin, of which most of us possess so little that we would be unwilling to have our ability tested by one who is a recognized authority in that language Encouraging students to think that it is a creditable thing to shine in a veneer of knowledge as superficial as that of Latin usually is cannot but have a detrimental effect on the inculcation of the principle of thoroughness that should guide all good teaching

6 By far the most important reason for writing prescriptions in English lies in the difficulty medical students have in learning the Latin form To the student, prescription writing is a bugbear When one thinks of the crowded medical curriculum and the comparatively small number of hours set aside for pharmacology and therapeutics, it seems a pity to waste any of it on the acquiring of an antiquated form of expression

It appears that the real reason for prescription writing in Latin is historic It originated in the days when Latin was the chief medium for exchange of scientific thought No longer, however, are scientific lectures delivered in the Latin tongue, no longer are medical books written in Latin, no longer is it considered essential for an educated man to speak Latin, and yet we still feel bound to write prescriptions in that dead language Is it not time to relieve our medical students of this useless burden that is put on them to the detriment of something else that would be much more useful to them and to their patients? *Let us at least admit that a prescription correctly written in official English is as good as one written in Latin* Let us permit students and practitioners to use whatever form they prefer, and let us merely hold our students for a sufficient knowledge of the Latin form to enable them to translate and understand such prescriptions

A DIGEST OF REPLIES TO QUESTIONNAIRE ON PRESCRIPTION WRITING IN ENGLISH

A preliminary draft of this article was sent to leading medical teachers, to deans of schools of pharmacy, and to secretaries of state boards of health For the numerous replies obtained in return, and, most especially for a number of suggestions received from some of those in favor as well as some of those opposed to the proposition, I wish to express my sincere thanks An analysis of the reports gives the following results

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[2] Fantus, Bernard What Instruction Ought Medical Colleges to Give in Pharmacology and Therapeutics, Part B of Symposium The Viewpoint of the Pharmacist, Quart Fed State Med Boards of U S, 1914, p 293

Of sixteen deans of colleges of pharmacy who responded, ten were in favor of the proposition, four were opposed, and two were neutral

Among ninety-two medical teachers, who responded, sixty-seven were in favor, twenty-two opposed, and three neutral

In two institutions, the question of prescription writing in English was taken up in faculty meeting The faculty of the School of Medicine of Yale University voted, Jan 24, 1916, that "it was the sense of the faculty that English be the language of choice in instruction in prescription writing" The faculty of the University of Michigan, on the other hand, passed a resolution, Jan 25, 1916, opposing the writing of prescriptions in English In its opinion, more time, instead of less, should be given to Latin

An interesting reply was received from Prof Gabriel Casuso, president of the University of Havana, Cuba, from which I quote "I believe you are right in every respect — among us, the laws governing the matter, although they do not restrain the use of Latin, allow the employ of the vernacular tongue, and the pharmacists are not obliged to dispense prescriptions unless they are written in plain Spanish "

To secretaries of state boards of health, the question was sent, "Would your examining board give a candidate a low grade, should he, in an examination, write a prescription in correct English instead of writing it in Latin"?

In reply to this, the following state boards expressed, through their secretaries, presidents or examining officers, their willingness to accept prescriptions written in English at the same value as those written in Latin Alaska, Arkansas, California, Connecticut, Florida, Louisiana, Montana, Minnesota, Massachusetts, New Mexico, Ohio, Rhode Island, Virginia, Vermont, Wisconsin and West Virginia

The following state boards have declared their objection to prescription writing in English Illinois, Iowa and New Jersey This makes a total of sixteen in favor, and three opposed

From this it will be seen that the sentiment in favor of English prescription writing is surprisingly general

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A CASE OF TORSION OF THE SPERMATIC CORD WITH TERATOMA OF THE TESTICLE*

J W Babcock, M D, New York

The combination of torsion of the spermatic cord with a new growth of the testicle seems so unusual as to warrant a report of this case The search of the records of a few years which were available to me failed to reveal a report of this particular association of lesions, though, doubtless, it is not unique

The subsequent course of the case should also be of interest for the patient was operated on sixty-one days after the first symptom referable to the tumor of the testicle only the more acute symptoms of torsion however, causing him to consult a physician The bad prognosis of new growth of the testicle we hope will not apply to this case on account of its early radical treatment Bulkley[1] gives a record of eight deaths within one year following operation for malignant disease of the testicle, in fifteen cases, or 53⅓ per cent , and only two of these patients, or 13⅓ per cent, were known to be alive and well after two years Nearly all the other reported cases of malignant disease of the testicle are supplemented by accounts of subsequent and early death with recurrence, usually distant metastases In the case reported the patient was seen five months after operation, and at that time showed no symptoms or signs of recurrence

CASE REPORT

History—C C, man, white, aged 24, clerk, admitted to Presbyterian Hospital Oct 8, 1915, injured the left testicle with his thigh six weeks before in sitting down, causing only slight pain The next day a slight swelling of the left testicle was noted, which continued without appreciable change and was accompanied by slight soreness in the left testicle, radiating up to the left hip and lumbar region, but not incapacitating him

On the morning of admission, on stretching after getting out of bed, he was seized with an excruciating pain in the left testicle, and the testicle became hard and tender He was seen by a physician, who said it was a hernia, and manipulated it without relief There were no general symptoms

The patient's past and family histories were negative, except that he had a small left inguinal hernia six years ago, which disappeared after wearing a truss for one year Venereal disease was denied

Examination—The patient was well developed He suffered acute pain The left testicle was twice the size of the right and slightly tender, the left epididymis was posterior, slightly swollen and extremely tender A tiny cystic mass was palpable just above the globus major The spermatic cord was slightly thickened, not nodular, and very tender up to the internal abdominal ring Rectal examination was negative There was no discharge from the meatus

Temperature, pulse and respirations were negative Blood count showed 16,000 white blood cells with 88 per cent polymorphonuclears Examination of the urine was negative

Treatment and Course—The patient experienced great relief from pain after use of support to scrotum, an ice cap and ichthyol The swelling, however, increased somewhat in size, owing to a collection of fluid in the tunica vaginalis Some difficulty was experienced in reaching a diagnosis, but finally acute epididymitis and orchitis, with the possibility of an underlying tuberculosis of the epididymis was considered most probable, and the patient was allowed to go home, Oct 16 1915, to continue conservative treatment It is interesting to note that the correct diagnosis was considered and thought improbable

The patient was readmitted, Oct 26, 1915, having had a sudden increase in his pain and the swelling six days before relieved somewhat by aspiration of a small amount of clear yellow fluid from the tunica vaginalis

Physical examination then showed a firm, moderately tender mass in the left side of the scrotum not so heavy as solid tumors usually are, and showing a small amount of fluid without great tension, in the tunica vaginalis The tenderness extended along a somewhat thickened and nodular cord up to 1 inch beyond the external abdominal ring Rectal examination was negative

Operation—Next day, by courtesy of Dr S Burnap, I performed a left orchidectomy with high ligation of the cord with the following findings There was a moderate amount of serous fluid in the tunica vaginalis The testicle was enlarged to about 2 inches in diameter, and on exploratory incision yielded only a few drops of dark blood The epididymis was brown and not enlarged The testicle was rotated 360 degrees counter-clockwise and the veins in the spermatic cord above the twist were firmly thrombosed There was no definite gangrene, and the existence of the teratoma was not suspected, but relief of the torsion did not improve the circulation and the torsion showed a tendency to recur so orchidectomy was deemed advisable

The patient made a satisfactory recovery with no complications, and was examined five months later, when he showed no symptoms or signs of recurrence

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* From the service of Dr E Eliot Jr at the Presbyterian Hospital in the City of New York, by permission of Dr G E Brewer Surgical Director

[1] Bulkley K Malignant Disease of Retained Testicle Surg Gynec. and Obst 1913 xvii 703

Pathologic Report (by Dr F B St John)—The specimen consists of a testicle and epididymis measuring 5 5, 5 5 by 4 5 cm, with 4 5 cm of spermatic cord Part of the wall of the tunica vaginalis is hemorrhagic The surface of the testicle is shiny, reddish gray and smooth It is rather soft and fluctuating in consistency

Microscopic examination shows a normal testicular glandular arrangement, but the testicle proper is largely replaced by connective tissue, in the center of which is a large area of cells, made up almost entirely of cartilage cells The periphery of this area seems to merge indefinitely into surrounding connective tissue Outside of this rather dense central area is a large area of polymorphonuclear infiltration and round cells, beyond which is definite necrosis, consisting of poorly stained cell debris

Diagnosis—Teratoma of testicle with acute inflammation

75 East Eighty-First Street

Therapeutics

HEMORRHAGIC CONDITIONS

(*Continued from p 1623*)

HEMOPHILIA (BLEEDERS)

Hemophilia is a condition, usually hereditary, characterized by a decrease in the coagulation time of the blood and frequently resulting in death from hemorrhage The hemorrhage may be spontaneous, or it may be initiated by a cut, bruise or blow The bleeding is not limited to any part of the body

Hemophiliacs, commonly known as "bleeders," are of the male sex Female "bleeders" have been reported occasionally, but not enough evidence is furnished to show that these are true hemophiliacs Hess[1] characterizes some of these cases in females as hereditary purpura The disease is transmitted through the female members of the families to their male offspring Such cases can be traced through generations of families, several male members, but not all necessarily, of one generation being affected Often the hemophilic tendency will make its appearance early in infancy, occurring at birth when the umbilical cord is severed J E Welch[2] mentions such cases, and also bleeding from other parts in the new-born under the name of "hemophilia neonatorum"

Various theories have been advanced as to the etiology of this condition These can be divided into two groups (1) deficiency in one or more of the blood elements, and (2) deficiency in the elements of the cells of the blood vessel walls In the first group the hemorrhage has been attributed to lack of calcium, deficiency or prothrombin, or to an excess of antithrombin Weil[3] has even claimed the presence of anticoagulants in the blood On the other hand, it has been asserted that there is abnormal fragility of the blood vessel or that there is lacking in the cells of the wall a fibrin-forming substance — thrombokinase No doubt cases may be found that are explainable by any of these theories

Certain factors relating to the blood in hemophilia have been definitely proved It has been repeatedly shown that the coagulation time of the blood is prolonged Normally blood will coagulate in from ten to twenty minutes, with the same methods for determining coagulation time of the blood in hemophiliacs, it has been shown that the coagulation time may be prolonged for as long as five hours Hess states that the coagulation time should be taken at different periods, since occasionally it may approach normal It is probable that on the occasions when it approaches normal there is admixture of juices containing thrombokinase from tissue at the site of puncture Duke[4] and others have shown that the blood platelet count in hemophilia does not vary from the normal, whereas in purpura hemorrhagica it is lower than normal In exceptional cases, such as one mentioned by Hess, the calcium content has been found unchanged Howell[5] found a deficiency in prothrombin, the antithrombin being normal or only slightly increased

A hemophiliac may be unrecognized until hemorrhage occurs, from any cause or spontaneously Profuse epistaxis is frequent, or severe hemorrhage may follow tooth extraction, or there may be bleeding into the stomach or intestines The hemorrhage may be subcutaneous, following blows, and resulting in the formation of hematomas A well known symptom of hemophilia is effusion into the joints The larger joints are most often affected, particularly the elbow, knee or ankle joint This hemarthrosis may first manifest itself by pain in the joint, soon followed by swelling Occasionally fever is associated with it The true nature of the condition is often not diagnosed, a common diagnosis being articular rheumatism or tuberculous arthritis Operations based on incorrect diagnoses have resulted fatally If the joints are not opened, but are treated gently by massage or heat, the effusion of blood disappears, sometimes within a few days, or sometimes only after weeks or months Recurrences may follow, but the tendency for this grows less as the patient becomes older Following one absorption of blood there may be a partial ankylosis

TREATMENT

The treatment of hemophilia up to within a recent period has been as varied as the theories of its cause Recently it has become more uniform because of successful experiences covering a large number of cases Treatment may be general and local It depends to a great degree on the location of the hemorrhage If there has been considerable loss of blood, the patient should be supplied with sufficient fluids to help make up this loss Milk is recommended, both on account of its calcium content and because of its nutritive value If marked anemia is present, iron in convenient form should be given This may be administered by the saccharated oxid, in 3-grain tablet, crushed with the teeth before swallowing, one tablet two or three times a day, after meals, as the reduced iron in 0 10 gm dose, in capsule, two or three times a day, after meals, the Blaud pill, 3 grains, two or three times a day, after meals, or the tincture of the chlorid of iron in 5-drop doses, in fresh lemonade or orangeade, three times a day, after meals As has frequently been stated, there is no advantage in an organic iron over an inorganic iron, and there is no necessity of giving large doses of iron in simple anemia

For directly diminishing the coagulation time of the blood two methods have been tried The first consists of the administration of empiric remedies supposed to supply one of the missing factors necessary for coagulation Calcium in some form is frequently of benefit in these cases It may be administered as simple lime water in tablespoonful doses, three or four times a day, given in milk or in water, or as calcium lactate, in dose of 0 3 gm (5 grains) given in some solution three or four times a day Calcium chlorid is perhaps most frequently used, but it is more irritant and of no greater efficiency than other forms of calcium The dose should be about 0 3 gm , given very well diluted, and three or four times a day, as desired This form of calcium is more likely to upset the stomach than are other forms

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[1] Hess, A F The Blood and the Blood Vessels in Hemophilia and Other Hemorrhagic Diseases, Arch Int Med, February, 1916, p 203

[2] Welch, J E Am Jour Med Sc, June, 1910, p 800

[3] Weil Press med, 1905, xi, 673

[4] Duke, W W The Pathogenesis of Purpura Hemorrhagica with Especial Reference to the Part Played by Blood Platelets, Arch Int Med, November, 1912, p 445

[5] Howell, W H The Condition of the Blood in Hemophilia Thrombosis and Purpura, Arch Int Med, January, 1914, p 76

Another remedy used for local application is epinephrin Its value is based on its vasoconstricting action In hemophilia it has been tried without apparent success

The best results obtained have followed the use of serums Various kinds have been administered, among which are rabbit, horse and normal human serum The serum has been used in different forms freshly obtained from the blood in the form of plain horse serum or weak preparations of diphtheritic antitoxin when other serum is not available, also solutions of the dried serum Of late controversy concerning serum therapy has been confined mainly to the kind of serum producing the best results All are agreed as to the value of serum in hemophilia

Serum may be administered intravenously, subcutaneously, or applied locally to the bleeding point, if it can be reached When given intravenously or subcutaneously, proper aseptic precautions should be taken For intravenous injection, from 10 to 20 c c can be given every day until the bleeding stops, whereas for subcutaneous injection this dose should be doubled The intravenous injection has great advantage over other methods, since by mixing intimately with blood it supplies more rapidly the absent elements necessary to increase the coagulability of the blood When given subcutaneously, the serum must first be absorbed into the blood stream from the tissues, and before this can occur it will probably undergo a certain amount of change from action by the tissue cells

Normal human serum, if this can be obtained, is without doubt the best to use, since it contains no foreign proteins Cooley[6] suggests that "the blood-forming tissues react to the stimulus of normal serum (or blood) by the formation of normal blood and that possibly there is a reaction between normal blood and the vessel-walls, lacking in certain abnormal states, which explains the complete cessation of hemorrhage "

It has been found that following the administration of either rabbit, or more particularly, horse serum there occasionally follows definite symptoms to which has been given the name "serum sickness " This consists of a rise in temperature and the formation of an urticarial rash, the rash often being surrounded by an area of edema The urticarial rash often fades into a scarlatiniform rash that lasts for several days

Horse serum (or diphtheritic antitoxin) is the most convenient form, as it is readily obtainable There must be borne in mind, however, the possibility of anaphylactic shock, which should be carefully considered before the serum is administered to those patients who have more or less recently received injections of antitoxin Also, before any horse serum is injected it should be known that the patient does not suffer from hay-fever or asthma from horse emanations

Unless proper agglutination and hemolysis tests are first carried out, just as they are for transfusions, whole blood should not be injected into the veins

Good results have been reported from the use of tissue extracts applied locally to the bleeding point These tissue extracts have been thyroid, ovary, liver, pancreas, kidney and spleen The thyroid extract has been used most frequently No good reason has been offered for the hemostatic properties of tissue extracts Not infrequently profuse hemorrhages have been stopped by the administration of thyroid While thyroid extract increases a liability to hemorrhage in most individuals, and may even cause menstruation or increased menstrual flow in some instances, in hemophiliacs it has at times been successful in stopping bleeding when other treatments have failed Also, occasionally in profuse bleeding occurring at the time of the menopause, thyroid substance given in large doses, as much as 4 grains of the desiccated thyroid three or four times a day for a few days and then the dose reduced, has stopped bleeding when all other medication has failed

As a last resort, transfusion itself may be tried The usual precautions should be taken, the blood of both patient and donor being tested for hemolytic and agglutinative properties A Wassermann test of the donor's blood should also be made Ottenberg and Libman[7] state that "every individual known to have hemophilia ought to have at his command several persons whose blood, by previous tests, is known to be compatible with his and who are willing, when called on, to give blood for transfusion " If these blood tests have been made a long time before, the character of the blood may have changed, therefore such tests should not be relied on, but fresh tests should be made They also state that in transfusions some blood element is supplied that has been lacking, and on that account the cure is not always permanent as the supply is only temporary They report a series of five hemophiliacs who were transfused, and in every case the hemorrhage stopped after transfusion

Inasmuch as there is a high mortality in hemophilia, unless the hemorrhage is promptly and completely checked, advantage should be taken of every available means to obtain serum or to make arrangement for a transfusion If there is no source from which fresh serum can be obtained, and if for any reason transfusion cannot be done, horse serum or antidiphtheritic serum, which can always be procured, should be injected We would also refer a physician interested in this subject to a recent article by Hurwitz and Lucas (*Arch Int Med* , April, 1916, p 543)

(To be continued)

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[6] Cooley T B The Treatment of Hemorrhagic Disorders The Journal A M A. Oct 4 1913 p 1277

[7] *Ottenberg and Libman Am Jour Med Sc 1915 cl 36*

The Economics of Hygiene —The great preventable wastes in this world are, I believe wastes which can be prevented only, or chiefly, by hygiene Crime vice, insanity, disease death and poverty could be wonderfully reduced by applying hygienic knowledge, even the little already available The economic cost from wrong habits and conditions of living is I am convinced on the basis of such fragments of evidence as are obtainable, so colossal that even workers in this field would be astonished if the whole picture could be revealed —Fisher

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SATURDAY, MAY 27, 1916

THE RESTORATION OF THE BLOOD VOLUME AFTER HEMORRHAGE

Any considerable diminution of the total volume of the blood, as by bleeding, would obviously lead to serious consequences unless compensatory activities of some sort promptly ensued. Any resulting depression of the circulation through the brain, for example, would speedily be attended with deleterious effects of a far reaching character. Fortunately this is usually averted in part by the general vascular constriction which follows hemorrhage, diminishing the total capacity of the circulatory system and altering the distribution of pressures throughout it. In addition to this response, the deficiency of blood caused by removal of this fluid is soon remedied by a transfer of fluid from the tissues to the blood. The exchange goes on with surprising rapidity, often beginning even during the course of the hemorrhage.

How this transfer is accomplished has been somewhat of a physiologic puzzle. The passage goes on far too rapidly to be accounted for by the slow flow of lymph into the blood stream, and for a variety of additional reasons this factor can be excluded as being of primary significance. It was suggested by Landerer[1] that when the pressure in the blood capillaries falls, as the result of hemorrhage, below that in the tissue spaces, the fluid present there is forced back into the capillaries. This is the so-called backward filtration theory. According to Starling,[2] on the other hand, there is normally a balance in the production and absorption of tissue fluid between the filtration pressure in the capillaries and the osmotic pressure of the colloids of the blood and tissue fluid. Plasma and tissue fluid are practically identical in their composition in everything except protein. Starling showed that the blood proteins exert an osmotic pressure of about 4 mm. of mercury for every 1 per cent. of protein. Since the plasma contains more protein than the tissue fluid, its osmotic pressure is greater, and this greater osmotic pressure should cause an absorption of fluid when the capillary pressure is reduced.

Dr. F. H. Scott[3] of the University of Minnesota has pointed out that after hemorrhage, if the backward filtration theory is correct, the fluid which enters the blood should have some protein, while according to Starling's theory the fluid should be practically salt solution. Thus it seemed possible that a comparison of the protein content of the blood before hemorrhage and a short time after it might throw light on the nature of the fluid passing into the blood. In a newer investigation of the subject, Scott has indeed found that after hemorrhage an increase occurs in the total protein of the blood plasma, corresponding to a protein content of from 0.6 to 2.01 per cent. in fluid which has passed through the capillary wall from the tissue spaces to the blood. But similar increases of protein may also be observed after injection of Ringer's solution into the blood and when, as a consequence, the injected fluid instead of entering the blood is leaving it for the tissue spaces at a rapid rate. It has been shown that dilution of the blood in vitro with isotonic salt solutions may lead to an increase of the nitrogen in the plasma. The gain must, of course, be derived from the corpuscles. The dilution of the blood in the circulation itself, caused by the intake of fluid from the tissue spaces, produces a change similar to that caused by diluting the blood in vitro with isotonic salt solution. In the living circulation the endothelial cells of the blood vessels might also share in the contribution of protein to the diluting fluid. Consequently an increase of protein in the plasma after hemorrhage is no evidence of backward filtration, and is consistent with Starling's view that in restoring the volume of the circulation the fluid passes into the capillaries by osmotic action.

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[1] Landerer, A. S.: Die Gewebsspannung in ihrem Einfluss auf die örtliche Blut und Lymphbewegung, Leipzig, 1884.

[2] Starling, E. H.: Jour. Physiol., 1896, xix, 312.

[3] Scott, F. H.: The Mechanism of Fluid Absorption from Tissue Spaces, Jour. Physiol., 1916, L, 157.

THE STRUCTURE OF THE THYROID IN RELATION TO ITS FUNCTION

Attempts to correlate the functioning of various glandular organs of the body with corresponding alterations in their structural make-up have been frequent in the modern history of the physiology of secretion. In this way it has been demonstrated that the histologic appearance of the cells of the secretory glands which discharge their product into the alimentary tract changes with the state of the glands in respect to rest or activity. The morphologic alterations incident to the secretion of structures of this type are of the same general character, whatever the class of digestive glands that is investigated. In the salivary glands, for example, the resting cells show a mass of highly refractive granules distributed in the protoplasm. After vigorous secretion, the individual cells are as a rule found to be smaller, and the simple protoplasm is relatively increased in amount, while the granules are much fewer and are now confined almost entirely to the inner margins of the cells near which they are ordinarily discharged or converted into secretion. Activity is thus associated with a discharge of granules, and probably with some increased production of protoplasm. As one physiologist has expressed it, we may regard the act of secretion as determined by the alteration of the granules and their discharge, together with water and salts, to form the specific secretion of the gland. During rest the granules are formed anew by precipitation in the protoplasm surrounding the nucleus, or by modification of it. Although the granules form the secretion, presumably they represent, not the secretion as such, but a precursor of some of its constituents.

Inasmuch as the so-called ductless glands of internal secretion, or the endocrine glands, as they have been called of late, show many structural similarities to the familiar secretory glands, there has been a tendency to apply analogies derived from the latter to the functions of the former class. If it were possible to correlate definite changes of structure with functional phenomena, it would, of course, enable one to form some estimate of the "secretory potential" of a gland by a histologic examination of its cells. The thyroid gland contains cells which resemble those of an ordinary secreting gland in many ways, notably with respect to the granules and other cytoplasmic details as well as the arrangement of the cells in the organ. The search for histologic evidences of the secretory activity which is indicated by a variety of physiologic experiences has revealed rather conflicting results. The thyroids are composed of vesicles of different sizes, which are lined by a single layer of cuboidal epithelium and contain in their interior the material known as colloid. Inasmuch as the gland possesses no duct it has been supposed that the cells furnish their specific product, that is, an "internal secretion," to the blood along the lymphatic efferents of the gland. Accordingly, it is stated that the colloid which has been looked on as identical with the active substance of the secretion is formed in the lining epithelial cells, and that the vesicles finally rupture and discharge the colloid into the surrounding lymphatic spaces.

Bensley[1] has recently pointed out how baffling the interpretation of the presence of the storage product in the thyroid has been. The route and rate of absorption of the thyroid colloid have remained problematic after years of observation, though chemical and physiologic studies have indicated that it contains the physiologically active thyroid component. Bensley recalls that some observers have even doubted the resorption of this material, and have suggested that the function of the thyroid gland is primarily to withdraw toxic substances from the blood. Others have conceived the colloid as a sort of menstruum in which the real thyroid secretion is received and from which it may be withdrawn without visible change in the colloid itself. Still others have held the view that the colloid is the real secretion of the thyroid gland, and that the normal mechanism of thyroid secretion is by this indirect route, first secreting into the center of the follicle and then withdrawing this warehoused material, as functional needs require, by some unknown method and route.

The experimental prosecution of investigation in this field is rendered difficult by the fact that few, if any, reliable methods of provoking thyroid function are known, so that it is not easy to decide whether a given gland is in a state of normal activity or hypersecretion. In an elaborate research on the structure of the thyroid as modified by diet and drugs, Bensley[1] has succeeded in demonstrating histologically the presence of what he terms the "secretion antecedent." The substance occurs in vacuoles, present exclusively in the outer pole of the cell, which contain a dilute solution similar in its properties to the colloid of the follicular lumen, differing from the latter only in density. The secretion collected at the outer margin of the thyroid cells is believed to be destined to direct transport into the vascular channels. In accord with its endocrine function, the thyroid cell thus represents a true reversal of "polarity," unlike the exocrine glands of the alimentary tract, discharging its active product away from the real follicular cavity directly into the surrounding medium.

The theory just presented fails, however, to account for the occurrence of the intrafollicular colloid in contact with the inner surfaces of the cells. It has frequently been observed that stored colloid may be withdrawn from the gland in a short period, and that the thyroid may be maintained for months in a condition in which little visible colloid is present. Bensley has reached the conclusion that in addition to the direct mode of secretion already described, there is an indirect mode which consists in the condensation of the secretion into the form of droplets having a high content of solids, and the extrusion of these into the follicular cavity. This implies that when the rate of production exceeds the body needs, the product of secretion is condensed, as it were, and stored as the familiar colloid in the intrafollicular spaces. On this hypothesis iodin, either by accelerating the activity of the gland cells or by inhibiting the removal of the product, causes the cells to reverse their usual processes and store colloid in the cavities.

If Bensley's observations prove to be tenable, the much discussed colloid in the thyroid vesicles is, by itself, no measure of the momentary activity of the gland, though it may indicate the capacity of the gland for storage of its physiologically active secretory product. Conversely, lack of colloid need not imply a permanent depression of actual glandular function, but merely a temporary depletion of storage material Dietary conditions, notably an excess of meat in the ration, may give rise to a condition of hyperplasia of the thyroid gland, iodids, on the other hand, facilitate the storage of colloid[2] These suggestions place the rôle of the thyroid colloid in a new light They permit the known facts, often seemingly contradictory, to be viewed in a new way, and may serve to illuminate what has long been a most perplexing theme

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[1] Bensley, R. R.: The Normal Mode of Secretion in the Thyroid Gland, Am. Jour. Anat., 1916, xix, 37.

THE INCIDENCE OF BOVINE AND HUMAN TUBERCLE BACILLI IN MAN

The controversy regarding the significance of the bacillus of bovine tuberculosis in relation to human hygiene, carried on ever since Theobald Smith, in 1898, made his systematic comparative study of bacilli isolated from man and cattle and pointed out differences between the two types, has lost much of its acrimony From a practical standpoint it is, of course, very important to learn whether the bovine and human diseases caused by the respective bacilli are mutually interchangeable At present it seems to be agreed that while cattle are to a considerable extent immune against the bacillus of the human type, human beings do not enjoy the same safeguard in respect to the bovine bacillus During adult life, however, the danger of such infection is far less than it is during infancy and early youth[3]

In the extensive investigations of Park and Krumwiede,[4] which have furnished some of the most important data respecting the types of tubercle bacilli which sojourn in the human body, it was found that out of a total of 1,042 cases, only 101 were bovine in origin, and over half of these occurred in children under 5 years of age Incidentally it may be noted that fifty-one out of the fifty-nine cases occurring in the 161 infants examined were directly or indirectly traced to alimentary infection, thus emphasizing the importance of a rigid sanitary control of milk supplies, on which infants are so largely dependent

More recently Eastwood and Griffith,[5] in Great Britain, have made a report of the relative distribution of the various strains of tubercle bacilli in human bone and joint tuberculosis, and likewise, in a smaller number of cases, in tuberculosis of the genito-urinary tract in man For the former investigation the material examined was removed directly from an affected joint or bone, or from an abscess in the neighborhood of such lesion Out of a total of 261 patients, fifty-five, or 21 per cent, were "bovine" cases Ten were recorded as atypical Only three of those reported on as harboring the bovine bacilli were over 16 years of age The incidence of the types is further shown by the fact that whereas under 10 years of age forty-five out of 155 cases, or 29 per cent, were bovine, over 10 years only ten out of 106, or 9 per cent, were of this type

In their report of 1910, Park and Krumwiede[4] described only two bovine cases out of a total of sixty-five cases of tuberculosis of bones and joints Twelve patients with tuberculosis of the genito-urinary tract disclosed only one infection of the bovine variety, the persons examined being adults, with one exception Seventeen cases, which were about equally distributed between the genital organs and the urinary tract, were investigated by the British bacteriologists The bacilli obtained were of the "human" type in fourteen cases, and "bovine" in three, the latter involving affections of the kidneys in persons aged, respectively, 25, 19 and 20 years Investigations of this sort, laborious as they are, seem well worth while from the standpoint of public health propaganda They give added assurance that although human adults are perhaps reasonably insusceptible to bovine infection, this mode of transmission can take place even beyond the years of infancy and childhood, in which the danger is unquestionably great

PELLAGRA IN NASHVILLE

An increase in the morbidity and mortality from pellagra in Nashville, Tenn, since 1911, provided the opportunity for a thorough survey of over half of the city, including 65,000 persons, by a pellagra commission, the results of which have recently been reported by Jobling and Petersen[1] Starting out with no preconceived theory as to the etiology of the disease, the commission gathered data, in more than 500 cases of pellagra, as regards the manifestations of the disease itself, its possible relations to sex, age and race, the season of the year, social and economic conditions, housing, occupation, diet, milk and water supply, parasitic infestation, method of sewage disposal, and previous exposure

The carefully analyzed statistics indicate that women from 20 to 50 years of age are affected from three to four times more frequently than men, though from 50 years on, the two sexes seem equally susceptible, that children, particularly during the second decade of life, are less subject to the disease than adults, that negroes are as susceptible as white people and that among them the mortality is higher, and that the majority of the pellagrins had their attacks during the spring and summer months, the white people more frequently during the spring, the colored people during the summer—a fact of interest in connection with the theory that pellagra is caused by "photodynamic substances"[2] Symptoms referable to the gastro-intestinal tract and nervousness frequently preceded the attacks for weeks or even months

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[2] Bensley, R R The Influence of Diet and Iodids on the Hyperplasia of the Thyroid Gland of Opossums in Captivity, Am Jour Anat, 1916, xix, 57

[3] Compare Hiss, P H, Jr, and Zinsser, H A Textbook of Bacteriology, New York, 1914

[4] Park and Krumwiede Jour Med Research, October, 1910

[5] Eastwood, A, and Griffith, F The Characteristics of Tubercle Bacilli in Human Bone and Joint Tuberculosis, Jour Hyg, 1916, xv, 257, The Types of Tubercle Bacilli Occurring in Tuberculosis of the Human Genito Urinary Tract, ibid, 1916, xv, 310

[1] Jobling, James W and Petersen, William The Epidemiology of Pellagra in Nashville, Tenn, Jour Infect Dis, 1916, xviii, 501

Among the possible causes of the disease — some of them given much credit in previous investigations — social and economic conditions, density of population, presence of silicates and absence of lime salts in the water (Alessandrini),[3] a deficiency of proteins in the diet, as regards both quantity and quality, and an excess of carbohydrates,[4] seem not to have been active The social and economic conditions of the areas afflicted with pellagra are not inferior to those of certain areas not so afflicted The water contains lime, and is used indiscriminately by both pellagrins and normal citizens A careful study was made of the diet of the pellagrins Accepting the conclusions of Chittenden[5] and McCay[6] that 40 gm of protein a day are sufficient to sustain life, the investigators found that 66 8 per cent of 421 pellagrins were consuming considerably more than this amount daily From the standpoint of quality, also, the protein diet seemed to be reasonably varied, moreover, the height and development of patients compared favorably with the height and development of normal persons, and men with the same diet as women, with probably greater protein requirements than women, were yet less susceptible to the disease Vitamin-containing substances[7] likewise were being obtained in the form of potatoes, milk, butter, fruit, etc That there was an excess of carbohydrates in the diet of these people was evident, but "it is gradually being supplanted to such a degree in many pellagrous families by wheat flour that it can hardly be considered an etiologic factor"

The significant localization of this disease in certain areas of the city, and the fact that the social and economic conditions in these areas were the same as in other areas not subject to pellagra, pointed directly to the one factor of difference — the method of sewage disposal — as having an etiologic relation to the disease Pellagra was largely confined to the unsewered areas of the city, and of those pellagrins who lived elsewhere, the majority had developed the disease while living in an unsewered neighborhood or on the edge of an unsewered area, or had been in the habit of visiting friends and relatives in an unsewered area The sanitary conditions in the unsewered sections of the city were of the worst In an area of a square mile in which pellagra and typhoid were most prevalent were found 1,500 privies, rarely cleaned and almost never enclosed so as to prevent the entrance of flies These privies were located seldom more than 50 feet and frequently not more than 15 or 20 feet from the kitchens of the houses Two per cent of the kitchens were screened Another significant fact brought out in the survey was that 78 8 per cent of the patients had been in intimate contact with other pellagrins before they themselves had developed the disease Finally, the installation of sewers in certain areas was followed by a decrease in the number of cases of pellagra originating therein, and the isolation of cases in certain institutions in which pellagra had made its appearance seemed to prevent further spread of the disease

The results here outlined are highly interesting indeed, and will exercise much influence on investigation of the problem of pellagra, because they indicate that factors other than deficiencies in diet are concerned

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SCIENCE AND PRACTICAL COMMON SENSE

Almost every one who is engaged in scientific work is certain sooner or later to find the impression, among people at large and even among some practitioners of medicine, that there is something unpractical and visionary about so-called scientific knowledge This sentiment crops out in various ways Sometimes it represents "the survival of the idea long held that science is a kind of hobby, chiefly for the men who pursue it, that while it may throw light on the abstruse problems of the universe it is not to be the guide of the practical man, and that its adherents are impractical" It is from such a view that the feeling of a sort of antagonism between science and what is called "common sense" derives its origin Reference is sometimes made to "sound practice" as if it were something quite independent of scientific principles, or even superior to them Another somewhat prevalent conception confuses science with theory, whereby the term "scientific" is regarded as synonymous with theoretical

In a recent discussion[1] of these prevalent tendencies of opinion, it has been pertinently remarked that although theory and hypothesis aid in the development of scientific knowledge, pure theory is not science, nor is science mere theory We wish that this might be more widely appreciated, for it would spare scientific workers from much undeserved criticism Any one who will take the pains to review the history of experience in any field of endeavor can easily convince himself how little of permanence there is in many of the vaunted "common sense" plans, theories or procedures The history of medicine or agriculture, for example, readily furnishes instances of the complete abandonment of "practical" methods discredited by scientific investigation

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[2] Raubitschek Wien klin Wchnschr 1910 xxiii 23

[3] Alessandrini Ann d ig 1914 xxiv 1

[4] Goldberger Joseph Waring C H and Willets D G The Prevention of Pellagra Pub Health Rep Oct 22 1915 p 3117 Siler J F Garrison P E and MacNeal W J A Statistical Study of the Relation of Pellagra to Use of Certain Foods and to Location of Domicile in Six Selected Communities Arch Int Med. September 1914 p 293

[5] Chittenden Physiological Economy in Nutrition 1904

[6] McCay Scientific Memoirs New Series Medical and Sanitary Department India 1908 p 34

[7] Funk Munchen med Wchnschr 1914 lxi 698

[1] Science and Common Sense editorial Exper Sta Rec 1916 xxxiv 401

Though the claims of science for wider recognition in the everyday world are becoming more readily accepted, there is much inherited prejudice or temperamental inertia still to be overcome before the omnipresent "busy practical man" will permit the development of an inquiry attitude, a desire to understand Has it not been said that "long-continued practice solidifies opinion and makes it impregnable to evidence, and that we come at length to substitute habit for reason?" Let us understand clearly, then, what are the real claims of science The first aim of any genuine work of science, however popular, says Karl Pearson,[2] ought to be the presentation of such a classification of facts that the reader's mind is irresistibly led to acknowledge a logical sequence — a law which appeals to the reason before it captivates the imagination Let us be quite sure that whenever we come across a conclusion in a scientific work which does not flow from the classification of facts, or which is not directly stated by the author to be an assumption, we are dealing with bad science Good science will always be intelligible to the logically trained mind, if that mind can read and translate the language in which science is written The scientific method is one and the same in all branches, and that method is the method of all logically trained minds

What shall be said of the supposed "practical" competitors of the scientific spirit and the consequences which it portends? The editorial to which reference has already been made[1] deserves to be quoted because of its lucid exposition of the fundamental fallacies in some of the current reactionary ideas Common sense, whether of high or low degree, it says, is in effect a product of reason and judgment applied to the facts and conditions as they are seen It rests on information and its interpretation So does science There is some very bad common sense, as there may be bad science Scientific facts are derived more accurately than personal impressions, by providing conditions which tend to guard against error or misconstruction Because the facts developed by scientific methods are accurate, dependable, unprejudiced, and not influenced by purely local conditions, they furnish a safe basis for intelligent reasoning along either practical or scientific lines The scientific method of deduction is more cautious and more restricted in its generalizations than personal judgment may be, but so far as it goes there is nothing antagonistic in it to good common sense The substitution of facts derived in a manner to make them thoroughly reliable, in the place of current notions, traditions and observations, instead of detracting from the practical value and reliability of personal judgment, strengthens it and makes it a safer basis for action There is no reason why the practical man's judgment should not be based on the best and safest sources of information available, and this is exactly what is taking place, whether it is fully realized or not As a matter of fact, science is becoming more and more an aid to sane and practical judgment in all affairs The more science furnishes the means for intelligent understanding and this understanding becomes disseminated among the people, the more common and reliable may "common sense" be, and the further will it be removed from the elements of mysticism, superstition and dogma Confidence in it will not suffer by reason of this change, for it will then rest on intelligence in the things that actually are, combined with sound judgment and clear thinking

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[2] Pearson, Karl The Grammar of Science, London, 1900, p 10

RECENT NECROPSY RECORDS IN THE UNITED STATES

There is evidence that the publicity in respect to the discrepancies between antemortem diagnoses and necropsy findings in the United States, together with the propaganda for more postmortem examinations in hospitals and elsewhere, is beginning to produce a long desired improvement in the situation Statistics gathered only a few years ago by competent investigators showed that the ratio of necropsies to deaths ranged above 25 per cent in only four of seventeen large hospitals in this country[1] Among the institutions surveyed by the committee of the New York Academy of Medicine, the two in America showing the highest percentage of necropsies to deaths were the Johns Hopkins Hospital of Baltimore, with a record of 62 7 per cent, and the Royal Victoria Hospital of Montreal, with a ratio of 67 6 per cent These figures have been contrasted with the decidedly higher postmortem statistics from European public hospitals of similar status

The desirability of checking diagnoses and the results of operative procedures by the necropsy findings needs only to be stated to most thoughtful practitioners in order to be appreciated In pointing out the value of the necropsy as a public service, Wilson[2] of the Mayo Clinic has remarked that some physicians entirely lack an interest in necropsies because they are not interested in accurate vital statistics and in problems of heredity in disease, or because they do not appreciate the value of the necropsy in the correction of errors of diagnosis Possibly some also hesitate, as Wilson remarks, to bring their diagnoses or operative procedures to the test of publicity in the necropsy Furthermore, he contends that most intelligent laymen will respond to the argument that they ought to know the weaknesses of the members of their own families, but this argument is frequently omitted or subordinated by the physician proposing that a necropsy be made Usually necropsies are asked for as a favor to the physician and rarely offered as a favor to the relatives

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[1] Report of Public Health, Hospital and Budget Committee, New York Academy of Medicine, The Journal A M A, June 7, 1913, p 1784

[2] Wilson, L B The Necropsy as a Public Service, The Journal A M A, May 8, 1915, p 1560

The continued awakening in the matter of necropsies is indicated by some new statistics called forth by an editorial comment[3] in the *Modern Hospital* stating that one hospital in America had been successful in obtaining permission for postmortem examination in 58.5 per cent. of the patients dying there. The director of the Pathologic Institute of the Cincinnati General Hospital, Dr. Paul G. Wooley,[4] now reports that between June 1 and Dec. 31, 1915, 293 necropsies were held from a total of 465 cases—a percentage of 63. This improvement is ascribed in part to better cooperation between the undertakers and representatives of the institute staff. The value of the better opportunities for the intensive study of clinical cases from the anatomic standpoint is stated to be demonstrated already. For the Robert B. Brigham Hospital of Boston, Dr. F. H. McCrudden[5] likewise reports that since its opening, April 1, 1914, complete necropsies have been carried out on 70 per cent. of all those dying, that is, thirty-five necropsies for fifty deaths. We shall look forward to a succession of advances over even these greatly improved records. That this is not impossible of achievement is suggested by the reports of the Mayo Clinic.[2] Under the more favorable conditions developed there, 512 necropsies in 626 deaths, or 81.8 per cent., were made during the triennial period 1910-1912; in 1913 they represented 84.4 per cent. of 269 deaths; in 1914, 88 per cent. out of 293, while in the early months of 1915 there were 73 necropsies for 73 deaths — a remarkable record of achievement in the face of the existing obstacles.

Current Comment

THE BABY'S CHANCE FOR LIFE

"No community with an infant mortality rate of over 50 can claim that its babies are getting anything like a square deal." This statement accompanies a statistical bulletin and chart recently sent out by the New York Milk Committee, showing infant mortality rates in a large number of cities in the United States. The committee sent a questionnaire to the health officers of 252 cities. Of these, 108 either furnished no information or were unable to furnish any that was reliable. The statistics obtained from the 144 cities that furnished information are embodied in the committee's bulletin. According to these figures, only four of the 144 cities are giving babies "a square deal." These cities, with their infant death rates, are La Crosse, Wis. (30.6), Ogden, Utah (39.8), Omaha, (47.1), and East Orange, N. J. (48.8). The highest infant death rate in the whole series is that of Passaic, N. J. (193.5), but in this "bad eminence" Passaic is closely rivaled by Montgomery, Ala. (185.1), Nashville, Tenn. (182.3), and Perth Amboy, N. J. (176.6). No city with a population of 200,000 or over has an infant death rate as large as those just mentioned, but not one of them has the "square deal" rate of 50, and few even approach this limit. The lowest rates among cities of this class are those of Seattle, Wash. (53.1) and Portland, Ore. (57.7). The highest are those of Jersey City, N. J. (132.9) and Indianapolis (131.6). To quote the bulletin: "Of the cities with a population of 100,000 or more, a baby born in Omaha was found to have four times as good a chance to live to celebrate the first anniversary of its birth as a baby born in Nashville, Tenn., or Fall River, Mass. In the cities under 100,000 and over 50,000 population, a Salt Lake City baby has over three times the chance of surviving the first year of life that a Passaic, N. J., or Holyoke, Mass., baby has, while in cities between 25,000 and 50,000 population a La Crosse, Wis., baby has an advantage more than six to one over a Montgomery, Ala., or Perth Amboy, N. J., baby." The conditions that cause these high rates may be remedied by any community that is determined not to tolerate this waste of infant life. For instance, of the 6,900 infant deaths that occurred last year in the Borough of Manhattan, New York, alone, over half—at least 3,500—may be classed as preventable if the New York Milk Committee's rate of 50 be accepted as normal. If only six babies in the Borough of Manhattan were to be killed or even threatened with death by a bomb from an aeroplane, the country would be aflame with indignation. An observer from Mars might find this phenomenon curious when placed by the side of the calm unconcern with which we regard conditions that doom to death thousands on thousands of infants in this country.

TUITION FEES AND THE COST OF TEACHING MEDICINE

The rapid increase in medical knowledge during the last quarter of a century has led to the complete reorganization which methods of teaching medicine have undergone in recent years. This reorganization required the establishing by each school of special laboratories equipped with expensive and technical apparatus, and the payment of fair salaries to full time skilled teachers. Instead of generous profits to the proprietors of medical schools, which was the case only a short time ago, the adequate maintenance of a medical school at present requires the expenditure of more money than can be obtained from even the most exorbitant tuition fees. As shown in a report published recently,[1] the total expenditure for teaching in eighty-two medical colleges from which reports were obtained was about five and a half million dollars, as compared with less than two million dollars obtained from tuition fees. In other words, the average cost of teaching each student enrolled in the eighty-two colleges reporting was $419, as compared with $150, the average amount received from each student in tuition fees. Notwithstanding this greatly increased expenditure, tuition fees have been only moderately increased The average tuition fee in all existing colleges is about $145, as compared with $109, the average fee charged by the same colleges fifteen years ago Tuition fees have been advanced by only about 25 per cent in the last fifteen years, therefore, although the cost of teaching has been advanced from the point at which students' fees permitted a profit, to the present situation where it exceeds the income from students' fees by 280 per cent This excess in expenditures has, of course, been met by state appropriations or by private gifts and endowments which, meanwhile, have not been obtained by the small and rapidly diminishing number of medical colleges still conducted for the direct benefit of their owners Such aid has invariably been furnished to the medical colleges which were worthy of it — colleges which were furnishing the best medical training possible with the funds at their disposal

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[3] Autopsies Increase in Number, editorial, Mod. Hosp., 1916, vi, 187.

[4] Wooley, P. G.: Some Good Autopsy Figures, Mod. Hosp., 1916, vi, 377.

[5] McCrudden, F. H.: More Good Autopsy Figures, Mod. Hosp., 1916, vi, 376.

[1] Finances of Medical Schools, The Journal A. M. A., April 8, 1916, p. 1115.

HIGHER TUITION, SCHOLARSHIPS AND NEEDY STUDENTS

The increased tuition fees, referred to in the preceding comment, have caused the publication of occasional statements expressing concern lest a medical education hereafter will be available only to wealthy students There is still no occasion to feel alarmed, however, regarding opportunities for deserving but needy students to enter on the study of medicine In a previous comment,[1] attention was called to opportunities for such students to work their way through the medical school in whole or in part It was shown that as a rule the majority of such students were found in the higher grade and better equipped medical schools, and that the best opportunities for student service were found in such colleges In a later comment[2] it was stated that the attempt to earn all expenses while doing justice to the exacting work of the medical course meant a strain which few could endure, and that the solution of the problem of the "poor boy" lay in free scholarships to be awarded to good students of limited means It was shown that 170 such scholarships had already been provided and that others were being added A report on another page[3] shows that at the present time scholarships and loan funds have been established in forty-eight medical colleges for the use of students who are without means otherwise to procure a medical education Altogether 296 free scholarships are now available, 116 more than were reported a year ago The increase in the number of scholarships, therefore, has been far greater than the increase in tuition fees It is a fact that students with limited finances frequently do better both in their studies and in their subsequent practice than some who have had ample funds at their disposal In this democracy the way must be kept open so that every deserving student, regardless of his financial condition, may find a ready and welcome entry to the practice of medicine

THE FALLIBILITY OF DRUG THERAPY IN TEXTBOOKS

Until very recently, we were compelled to acknowledge that little if any progress was being made in internal medicine so far as drug therapy was concerned Everybody knows of the progress made in other branches—in bacteriology, in pathology, in biologic chemistry, in surgery, in etiology and in the application of technical methods to diagnosis Recently, however, pharmacologic research and the application of scientific methods in the study of the physiologic action of drugs are resulting in definite, positive progress An important lesson, incidentally learned through this scientific investigation, is the fallibility of the drug therapy described in textbooks The explanation is, of course, that many of these textbooks are mere compilations containing false statements, unproved theories, and unverified clinical evidence representing the guesswork of ancient uncritical observers Many drugs have been, and still are, vaunted in textbooks as valuable in a variety of conditions, whereas scientific investigation and controlled clinical observation have proved them to be totally worthless, others are proving to be of value in an extremely limited number of conditions The sooner writers of textbooks realize this fact and enter into the spirit of the new era, the better for the public and for scientific medicine

Medical News

(Physicians will confer a favor by sending for this department items of news of more or less general interest, such as relate to society activities, new hospitals, education, public health, etc)

CALIFORNIA

New Attorney for the State Medical Board—John W Hart, Los Angeles, has succeeded Mr Ray Nimmo, resigned, as attorney for the State Medical Board

Personal—Dr Cornelius Van Zwaluwenburg, president of the Riverside Chamber of Commerce, fell down stairs at the Riverside City Hospital, fracturing his right femur——Dr William Palmer Lucas, San Francisco, professor of pediatrics in the University of California Medical School, has gone to Europe to aid in the organization of children's work for the American Commission for Relief in Belgium——Dr Hardolph Wasteneys has been appointed associate professor of pharmacology in the new department of biochemistry in the University of California Medical School

Medico-Military Preparedness—May 18, the scientific program of the Los Angeles County Medical Association was devoted to a symposium on "Military Medicine" Lieut-Col William E Purviance, M C, U S Army (retired), Los Angeles, delivered an address on "Medical-Military Preparedness", Lieut John J Kyle, M R C, U S Army, Los Angeles, major surgeon of the One Hundred and Sixtieth Indiana Infantry, U S V, during the war with Spain, spoke on "The Making of a Medical Officer", Maj Harlan Shoemaker, Los Angeles, formerly M C, N G Pa, now captain, M C, N G Calif, and first lieutenant, M R. C, U S Army, read a paper on "The Medical Corps of Our Army as a Career—With Some Recent Scientific Achievements by the Regular Medical Corps," and Maj Charles W Decker, M C, N G Calif, first lieutenant, M R C, U S Army, discussed "Sanitary Organization and Military Administration."

COLORADO

New Meeting Hall and Library for Society—The committee on raising funds for the new meeting hall and library building of the Medical Society of the City and County of Denver, met for organization, April 26 Dr William H

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[1] The Poor Boy and Medical Education, Current Comment, The Journal A M A, Jan 28, 1911, p 275

[2] Scholarships in Medical Education and the "Poor Boy," Current Comment, The Journal A M A, Feb 13, 1915, p 597

[3] Scholarships and Loan Funds in Medical Schools, The Journal A M A, this issue, p 1735

Crisp was elected secretary of the committee and Dr Walter A Jayne, treasurer The week from May 21 to 27 was designated as the time in which an active personal canvass of each member will be made The society is endeavoring to raise $500,000 for this purpose

Personal.—Dr Clarence D Ussher, for eighteen years a medical missionary of the American Board at Van, Turkey, delivered an address at the Congregational Church of Colorado City, May 10——Dr Richard W Corwin, chief surgeon of the Colorado Fuel and Iron Company, Pueblo sailed for Europe May 14, to inspect hospital methods in France and other European nations——Dr Raynor E Holmes, Canon City, has been appointed physician at the State Penitentiary, succeeding Dr Hart Goodloe——Dr Charles A Powers, Denver, sailed for France, April 8, on the *Chicago,* to work in the American Ambulance, Paris

FLORIDA

Health Train at Tampa—The educational exhibit train of the state board of health visited Tampa, May 20 to 22

Sanatorium Transferred—The De Soto Sanatorium property, Jacksonville, which was purchased by the Sisters of Charity of Emmitsburg, Md, for $67,000, was transferred to the Sisters, May 1 The staff of the institution remains the same, with Dr John E Boyd, Jacksonville, as chief of staff

New Officers for State Association—The forty-third annual meeting of the Florida Medical Association was held in Arcadia, May 10 to 12, under the presidency of Dr Robert H McGinnis, Jacksonville The following officers were elected president, Dr Edmund W Warren, Palatka, vice presidents Drs John A Simmons, Arcadia, E Van Hood, Ocala and John P Long, Lake City, secretary-treasurer, Dr Graham E Henson Jacksonville (reelected), delegate to the American Medical Association, Dr John MacDairmid, Deland, and alternate, Dr Frederick J Walter, Daytona Atlantic Beach was selected as the next place of meeting

ILLINOIS

Foot and Mouth Disease Breaks Out Again—A new outbreak of foot and mouth disease is reported in Christian County after a period of three months of immunity and the Federal Bureau of Animal Industry has placed the county under quarantine

Personal—Dr Edward H Harton director of the bacteriologic department of the Tri-Cities Hygienic Institute, LaSalle has resigned to accept a position as bacteriologist in the Northwestern University Dental College, Chicago——Dr J George Vaughan Aurora, a medical missionary in Nanchang, China, for the last seven years, is now on a furlough in America——Dr Clarence W East, Evanston has been appointed district health officer for the northeast section of the state——Dr Edmund J Burke, LaSalle, is reported to be ill with scarlet fever

State Society Meeting—At the sixty-sixth annual meeting of the Illinois State Medical Society, held in Champaign, May 16 to 18, Dr William L Noble Chicago, president-elect, assumed the office of president and the following officers were elected president-elect, Dr Elmer B Cooley, Danville, vice presidents, Drs Cyrus F Newcomb, Champaign, and Robert A McClelland, Yorkville, secretary, Dr Wilbur H Gilmore, Mt Vernon (reelected), and treasurer, Dr A J Markley, Belvidere (reelected), councilors, fourth district, Dr August H Arp Moline, fifth district, Dr Charles S Nelson, Springfield, seventh district, Dr Charles F Burkhardt, Effingham, eighth district, Dr Cyrus E Price, Robinson (unexpired term), delegates to the American Medical Association Drs Thomas O Freeman, Mattoon, Charles W Lillie, East St Louis, Robert S Denney Aurora, and Alexander M Harvey Hugh N MacKechnie and Jacob C Krafft, Chicago, alternates Drs Alban L Mann, Elgin, Frank C Sibley, Carmi, William D Chapman, Silvis and Hugo E Betz, Duncan R MacMartin and Henry F Lewis, Chicago Bloomington was selected as the next place of meeting, and the date of the meeting was fixed at May 15 to 17 The oration in surgery was delivered by Dr B Merrill Ricketts, Cincinnati, who spoke on 'Anesthesia From the Dawn and Its Relation to Surgery', and that in medicine by Lieut-Col William B Bannister M C, U S Army Chicago whose subject was "The Medical Mechanism of War in the United States' A committee was appointed consisting of Drs John M Lavin, P J H Farrell and Charles C O Byrne, Chicago, to perfect plans for recruiting members of the profession for the preparedness parade in Chicago, June 3 The House of Delegates heartily endorsed the general movement for national preparedness

Chicago

Presentation to Dr Coon—Patients of the Municipal Tuberculosis Sanatorium, May 14, presented Dr John W Coon with a written address of appreciation and an elaborate desk and filing cabinet system

Expensive Epidemic—Four scarlet fever epidemics at the University of Chicago this year are said to have cost the school $1,200, including the sums refunded to women students for rooms in campus dormitories and board

Meeting of Internists—The twelfth regular meeting of the Chicago Society for Internal Medicine was held, May 22 The program included papers by Drs Charles A Elliott and Walter H Nadler on "The Effect of Castration on Osteomalacia in the Male", by Drs R G Hoskins and W E Morse on "The Effect of Acid on Gastric Discharge", by Drs Ernest E Irons and P J Murphy, on "The Incidence of Localized Infection in Patients With and Without Apparent Metastatic Lesions," and by Dr Ethan Allan Gray on 'Intestinal Perforation in a Case of Pulmonary Tuberculosis"

INDIANA

Physicians Win Suit.—In the suit brought against Drs George E Lowe and Robert O Alexander, by Mrs Laura E Karnes in which damages of $25,000 were asked on account of alleged malpractice, the judge instructed the jury to find for the physicians

Pasteurization Favored—The State Conference of Health Officers was held recently in Indianapolis and passed resolutions favoring the pasteurization of milk, recommending to the legislature that whole-time health officers should be appointed and a better system of school inspection initiated

Hospital Improvements—The hospital building of the Odd Fellows' Home at Greensburg is to be improved by a two-story addition to cost about $25,000——The contract has been awarded for the construction of the Tuberculosis Hospital for Marion County, for $55,183 The building will be erected in the suburbs of Indianapolis

The Newcastle Clinic—Seven physicians of Newcastle have formed a cooperative organization known as the Clinic and are erecting a building to be devoted to pathologic, bacteriologic and chemical laboratories, operating, Roentgen ray and consultation rooms The members of the association are Drs Julius E Hiatt, D S Wiggins, Herman W MacDonald, Edson K Westhafer, Clyde C Bitler, George H Smith and G A Hiatt

Milk Standard Raised—The standard of milk has been raised in Indianapolis by a new city ordinance which requires the pasteurization and clarification of all milk sold in the city that does not have a bacterial count of less than 50,000 bacteria to the cubic centimeter This is regarded by the board of health as the greatest victory won by the medical profession of the city for many years The ordinance further requires the registration of all milk dealers with the board of health, giving the board authority to enforce sanitary regulations and to inspect all dairies where milk is produced for sale

KENTUCKY

Vance Memorial—May 15, the formal exercises were held at the Children s Free Hospital, Louisville in memory of Dr Ap Morgan Vance at which the Vance Memorial Ward was presented to the hospital, and a tablet, inscribed with the names of those who contributed to the fund for the equipment, was presented Dr Lewis S McMurty made the principal address

Louisville Antituberculosis Association—At the annual meeting of this organization, which operates the Hazelwood Sanatorium, April 10 it was announced that the sanatorium is now under the supervision of the Medical Advisory Board of which Dr Cuthbert Thompson has been the chairman since the death of Dr Ap Morgan Vance Dr Benjamin C Frazier is vice chairman, and Dr Oscar O Miller, corresponding secretary and physician in charge

Railway Surgeons Hold Meeting—The twelfth annual session of the Kentucky State Association of Railway Surgeons was held in Louisville, May 11 and 12 under the presidency of Dr Henry C Jasper, Richmond and the following officers were elected president, Dr Madison E Alderson, Russellville, vice presidents, Drs John Striegler, Elizabethtown, R Lee Bird, Covington, and secretary-treasurer, Dr Clarence

H Vaught, Richmond Dr Joseph C Bloodgood, Baltimore, read a paper on "Standardization of First Aid Packages"

Personal—Dr Archibald Dixon, Henderson, has been appointed a member of the State Tuberculosis Commission ——Dr Albert F Cornelius, Hazard, a member of the American Sanitary Commission to Serbia, returned from Serbia, April 27, on the Cunard steamer *Orduna* ——Dr Ralph Holt, Kevil, has been elected physician of McCracken County, succeeding Dr Clifford E Harkey, Paducah ——Dr Hervey S Keller, Frankfort, has resigned as a member of the Kentucky Tuberculosis Commission ——Dr William T Willis, Mt Sterling, has been appointed chief medical director of the Inter-Southern Life Insurance Company, Louisville, and will move to that city

MARYLAND

Funds for Contagious Wards—A campaign to raise $30,000 to provide contagious wards at the Harriet Lane Home for Invalid Children at the Johns Hopkins Hospital has been begun The home is asking for $10,000 a year for three years, the sum required to maintain its two wards for these diseases

Weekly Health Bulletins—Dr John D Blake, health commissioner, has been requested by the mayor to furnish a weekly bulletin outlining health conditions in Baltimore, and recommending how they should be handled It is intended that the bulletin be a guide to the public for the maintenance of health conditions in the city

Personal—Dr Frederick Williams has been appointed health warden for the Fourth Ward of Baltimore, succeeding Dr John F Byrne, resigned ——Drs John K Ormond, Frederick H Haessler and David R Murchison have been appointed members of the staff of the Ford Hospital, Detroit, and will assume their duties, July 1, and Dr Russell H Hayden, Baltimore, also appointed, will begin his service on September 1

Sanitary Campaign—Surg-Gen Rupert Blue, U S P H S, and a delegation of municipal officers and business men inspected the hospital and grounds at Quarantine, May 16, preparatory to turning the station over to the federal government In the evening General Blue and Dr Lewellys F Barker, Baltimore, spoke at a public meeting in the Auditorium Theater at which the sanitary campaign of the mayor was launched

Noted Chemist Dies—Harry Clary Jones, professor of physical chemistry in Johns Hopkins University since 1904, and a member of the faculty of that institution for twenty-one years, a recognized authority on physical chemistry, a member of many learned societies, editor of and contributor to numerous scientific journals, author of "The Modern Theory of Solutions," and "The Freezing Point, Boiling Point and Conductivity Methods", translator into English of many chemical works, Langstreth medalist of Franklin Institute in 1913, died at his home in Baltimore, April 9, from cerebral hemorrhage, aged 50

MISSISSIPPI

State Medical Meeting—The annual meeting of the Mississippi State Medical Association was held in Greenville, May 9 to 11, under the presidency of Dr Inman W Cooper, Newton The following officers were elected president, Dr Thomas M Dye, Clarksdale, vice presidents, Drs Thomas W Reagan, Union, Richard C Smith, Dwiggins, and Robert A Strong, Pass Christian, councilors, first district, Dr Lancelot L Minor, Hollywood, succeeding Dr Dye, elected president, fifth district, Dr Sam J Hooper, Kosciusko, and sixth district, Dr Sydney W Johnston, Vicksburg, delegate to the American Medical Association, Dr Inman W Cooper, Newton The annual oration was delivered, May 9, by Dr E Denegre Martin, New Orleans At the public meeting a loving cup was presented to Dr Carroll Kendrick, Kendrick, the presentation speech being made by Dr James W Lipscomb, Columbus Jackson was decided on as the meeting place for 1917

NEW HAMPSHIRE

New State Officers—The one hundred and twenty-fifth annual meeting of the New Hampshire Medical Society was held in Concord, May 6, under the presidency of Dr Edgar O Crossman, Lisbon After the president's address at the banquet in the evening, Dr David Cheever, Boston, gave an illustrated talk on his experiences with a Harvard Unit in the European war zone, and Dr Frederick C Shattuck, Boston, spoke on "The Modern Advances of Medicine" The following officers were elected president, Dr Emdon Fritz, Manchester, vice president, Dr Fred S Towle, Portsmouth, secretary, Dr Dennis E Sullivan, Concord (reelected), treasurer, Dr David M Currier, Newport, and delegates to the American Medical Association, Drs Walter T Crosby, Manchester, and Charles W Hannaford, Portsmouth

NEW YORK

Personal—Drs John H Wild, Charles Leone, Leon S Kurek and Herbert H Bauckus have been appointed city physicians of Buffalo

Laboratory Facilities of the Department—The state department of health calls attention to the fact that adequate laboratory facilities are now available for the examination of specimens for diagnosis, especially of diphtheria, tuberculosis and typhoid fever Physicians throughout the state are urged to take advantage of these facilities

Warning to Physicians—Asserting that more than one half of the cases of tuberculosis and nearly three fourths of the cases of typhoid fever are not being reported, Health Commissioner Biggs has sent a circular letter to all the physicians of the state warning them that continued laxity in this regard will result in prosecution under the public health law

Women's Medical Society—This society held its tenth annual meeting at Saratoga Springs, May 16, and elected the following officers president, Dr Eveline P Ballintine Rochester, vice presidents, Drs Edith R Hatch, Buffalo, Grace N Kimball, Poughkeepsie, and Beatrice M Hinkle, New York, secretary, Dr Ethel Doty Brown, New York, and treasurer, Dr Phoebe M B VanVoast, New York

Trudeau Tuberculosis School Opens—This postgraduate school for medical men who are specializing in tuberculosis was formally opened at Saranac Lake, May 17 Among the speakers on this occasion were Dr William H Welch, Baltimore, Dr Hermann M Biggs, New York, Dr Walter B James, New York, and Dr Edward R Baldwin, Saranac Lake The school is a memorial to Dr Edward Livingston Trudeau, and thus far $500,000 has been subscribed toward its support This fund is to be known as the Edward L Trudeau foundation

Social Insurance Inquiry—Under the auspices of the Committee on Insurance of the New York Chamber of Commerce, arrangements are being perfected for a comprehensive investigation into all essential phases of the subject of social insurance, between this and the next meeting of the New York legislature, with special regard to health insurance Dr J F Crowell, executive officer of the chamber of commerce, to whom communications may be addressed, will have charge of the inquiry This inquiry will extend not only to the actual developments in countries where health insurance has made some progress, but will also include a critical examination of the conditions, causes and effects of the different systems with a view to their availability for American communities It is intended to test the claims which existing systems made at the time of their origin in the light of results

Bills Vetoed—Governor Whitman has vetoed the bill known as the Elon R Brown bill which was amended in the legislature to meet the views of those who were endeavoring to prevent the pollution of the city's water supply by the sewage of the Mohansic State Hospital and the New York State Training School for Boys The governor states that he vetoed the bill because it fell far short of properly safeguarding and protecting the lives of the citizens of the state of New York It seems that there was nothing in the bill to prevent the commission selecting new sites for the institutions which are considered objectionable within the same watershed He also disapproved the plans and specifications for the new Mohansic State Hospital and the Boys' Training School which will prevent the starting of work on that institution until the legislature provides for the abandonment of these projects He has also vetoed the Simpson bill which would have granted to public service commissions instead of to health boards the power to make an order directing the maximum number of passengers to be carried in street cars

New York City

Fourth Base Hospital Unit.—A completely equipped base hospital of 500 beds has been presented to the New York County Chapter of the American Red Cross by Mr and Mrs George Blumenthal of this city This unit will cost $24 000, and will be organized in connection with Mount Sinai Hospital The staff will be recruited from the surgeons and nurses of the institution, and will consist of twenty surgeons, forty-six nurses and 125 orderlies Mobilization plans of the three units already organized are complete and the units are ready for service, either in the field in time of war or in the case of extreme emergency at the scene of a great disaster

NORTH DAKOTA

Hospital Items—The seventh day adventists of Harvey have secured control of the Harvey Hospital by the purchase of the majority of the capital stock——Col Alexander Scarlett, Minot, has deposited $250 for the benefit of the building fund of the new Catholic Hospital in Minot, subject to the receipt of ninety-nine subscriptions of similar amount before July 4

State Society Meetings—The North Dakota State Medical Association held its twenty-ninth annual meeting at Devils Lake, May 9 to 11, under the presidency of Dr Victor H Stickney, Dickinson New Rockford was selected as the place of meeting for 1917, and the following officers were elected president, Dr Victor J LaRose, Bismarck, vice presidents, Drs George M Williamson, Grand Forks, Edgar A Pray, Valley City, and William A Gerrish, Jamestown, secretary, Dr Hezekiah J Rowe, Casselton (reelected), and treasurer, Dr William F Sihler, Devils Lake (reelected) The annual banquet was held at the Great Northern Hotel on the evening of May 10

OREGON

Meeting of Southern Oregon Physicians—The annual meeting of the Southern Oregon Medical Association was held in Roseburg May 9 Grants Pass was selected as the next place of meeting and Dr Frederick D Stricker Grants Pass, was elected president, Dr Victor L Rocho, Yoncalla, vice president, and Dr Alvane C Seely, Roseburg, secretary-treasurer

Personal—Dr Ralph Charles Matson, Portland, will be a member of the staff of the research laboratory conducted by Col Sir Almroth E Wright, consulting physician with the British Expeditionary Force at Bolougne Dr Matson left Portland, May 15, and sailed from New York for England five days later——Dr Urling C Coe, Bend, has been appointed a member of the State Board of Medical Examiners, succeeding Dr Henry L Henderson, Astoria, term expired

PENNSYLVANIA

Personal.—Dr Edgar M Parlett, Newcastle, has been appointed chief of the Bureau of Welfare of the Baltimore and Ohio Railroad with headquarters in Baltimore.——Dr Evan O Neill Kane of the Kane Summit Hospital returned from abroad on the *Finland*——Dr Clyde Brooks of the University of Pittsburgh has resigned to accept a position as head of the department of physiology pharmacology and physiologic chemistry in the School of Medicine of the Ohio State University, Columbus

Factory Surgeons' Conference—The second conference of physicians and surgeons employed by the large industrial plants of the state was held in Harrisburg, May 18 Dr Francis D Patterson, Philadelphia, chief of the division of industrial hygiene and engineering presided The speakers at the morning session were Dr Alfred Stengel, Surg Joseph W Schereschewsky, U S P H S, Frederick S Crum, assistant statistician of the Prudential Insurance Company, and Dr Elizabeth B Bricker Lititz of the department of labor and industry The speakers of the afternoon session were all surgeons and physicians employed by the industrial plants of the state——It was announced that a clinic for the exclusive study of industrial and occupational diseases will be established in Philadelphia through the cooperation of Dr Alfred Stengel commissioner of labor and industry, Jackson, and Dr Francis D Patterson, chief of the division of industrial hygiene and engineering of the same department This clinic with Dr Stengel at its head will be opened at the University Hospital Philadelphia, about June 1 An entire ward will be devoted to patients suffering from diseases presumed to be the result of their working conditions Two physicians from the hospital and a score of social service workers will assist Dr Stengel in his study of vocational diseases which medical experts declare have never been thoroughly investigated

Philadelphia

Hospital Building to be Dedicated—The Mitchell Memorial Building of the Philadelphia Orthopedic Hospital and Infirmary for Nervous Diseases, Seventeenth Street, north of Summer Street, will be formally dedicated, June 1

Personal—Dr Malcolm C Grow has returned after a prolonged service with the Russian army on the eastern war front——Dr Max M Peet has been appointed instructor in the surgical department of the University of Michigan, Ann Arbor

Clean Up Week.—May 18, Clean Up Week was officially opened by the parade of the street cleaning forces reviewed by the mayor and his cabinet The street cleaning contractors are all required to have their full complement of men in the parade, and each year there has been a noticeable improvement in the equipment and efficiency of the forces

Work Resumed—Within a short time work will be resumed on the unfinished surgical wing of the Hospital of the University of Pennsylvania, on which work was stopped two years ago, when the board of managers ran out of funds to carry it on Three floors are completed and friends have since been successful in raising funds to complete the walls of the fourth and fifth floors

College Commencement.—The Ninety-First Annual Commencement of the Jefferson Medical College will be held, June 3 in the Academy of Music Dr William W Keen, emeritus professor of surgery in Jefferson Medical College, and president of the American Philosophic Society, will deliver the valedictory address His topic will be "The Doctor's Duty "

Free Baby Lectures—A campaign for better health among mothers and babies, and those in any way connected with children, was inaugurated, May 18, by the Child Federation in the Widener Building A store on the ground floor was obtained and daily talks were given to the public by physicians and health officials In order to make the campaign a popular one, an orchestra was obtained and a concert given every day at 11 45 a m There was a course of ten lectures, the first being given by Dr Joseph Neff, president of the federation and former director of health and charities Among other speakers at these noon meetings were Dr Judson Daland, May 19, and John M Patterson, judge of the court of common pleas, May 20

TENNESSEE

Funds for Galloway Hospital—It is reported that the recent ten-day campaign in Nashville resulted in raising $270,000 for the completion of the Galloway Memorial Hospital, the teaching hospital of Vanderbilt University, Medical Department This was $70,000 more than the sum contemplated

State Board Meeting—At the semiannual meeting of the state board of health held in Nashville, May 9, it was announced that arrangements had been made to secure five experts from the United States Public Health Service, working with a like number from the state department, to make a sanitary survey of Obion County——It was also reported that a hospital would be established at a cost of $9,000 in the mountain district of East Tennessee for the treatment of trachoma

Personal—Senior Surg Joseph H White, U S P H S, in charge of the Marine Hospital Memphis, delivered an address at the health exhibition, May 8, on 'Malaria, the Malaria Mosquito and Preventive Measures " Dr White has been detailed as director of the field campaign against malaria——Dr John R. Thompson, Nashville, has succeeded Dr Blackburn G Tucker, resigned as full time health officer of Davidson County——Dr Reese Q Lillard, Nashville secretary of the state board of health, is making an official inspection of the water supply of Bristol and a sanitary survey of the town of Kingsport

TEXAS

Personal.—Dr Manton M Carrick Dallas, is having erected a public drinking fountain in memory of his mother, Mrs Carrie Howard at Waxahachie——Dr Edgar W Loomis has been appointed health officer of Dallas

State College Alumni Organized.—An association of Dallas alumni of the University of Texas Medical Department, was organized at Dallas, April 28, at which Dr William C Swain was elected chairman, and Dr John M Boyd, secretary

Health Officers' School Opened—The second annual course of instruction for health officers under the auspices of the University of Texas Medical Department, Galveston, began, May 12, under the charge of Dr Burdett L Arms, professor of preventive medicine. During the course the mornings are spent in clinical and laboratory work, the afternoons being devoted to lectures

Quarantine Authority Defined—The attorney general's department on May 10 made a ruling that in establishing a general quarantine in a county or a political division thereof, the county health officer shall be required to act under directions from the county commissioner's court, but that in isolated cases the county health officer may establish and maintain quarantine on his own initiative

Texas Surgeons Elect—At the annual election of the Texas Surgical Association held in Dallas, April 24 and 25, the following officers were elected president, Dr James E Thompson, Galveston, vice presidents, Drs Joseph H Reuss, Cuero, and Frank Paschal, San Antonio, secretary, Dr W Burton Thorning, Houston, treasurer, Dr John B Smoot, Dallas, and recorder, Dr Charles S Venable, San Antonio

County Secretaries Hold Meeting—The annual meeting of the State Association of County Secretaries wes held in Galveston, May 11 An amendment was adopted changing the name of the association to the State Association of Medical Secretaries of Texas Dr Alfred W Davisson, Corpus Christi, was elected president, Dr Edgar F Gough, Waxahachie, vice president, and Dr H Lawler Wilder, Glen Rose, was reelected secretary

Health Survey—Dr Platt W Covington of the International Health Commission, Dr B W Collins of the State Health Department, Dr Burdett L Arms of the Medical Department of the University of Texas and Ernest Breihan have started a health survey of Leon County It is being conducted in three districts, each containing about 10 square miles, and each family in the districts to be surveyed has expressed willingness to submit to treatment when cases of disease are found and to observe, as nearly as possible, the sanitary regulations prescribed

Semicentennial of State Society—At the fiftieth annual meeting of the State Medical Association of Texas, held in Galveston, May 9 to 11, under the presidency of Dr George H Moody, San Antonio, almost 800 delegates were present, and the following officers were elected president, Dr James M Inge, Denton, president-elect, Dr Edward H Cary, Dallas, vice presidents, Drs Robert Y Lacy, Pittsburg, Charles R Johnson, Gainesville, and William L Brown, El Paso, secretary, Dr Holman Taylor, Fort Worth (reelected), treasurer, Dr Wilmer L Allison, Fort Worth (reelected), chairman, board of trustees, Dr John T Moore, Houston (reelected), member, Council on Medical Defense, Dr William A King, San Antonio (reelected), councilor from third district, Dr Charles R Hartsook, Wichita Falls (reelected), councilor from fifth district, Dr Charles S Venable, San Antonio, councilor from sixth district, Dr William N Wardlow, Corpus Christi (reelected), councilor from twelfth district, Dr Arthur C Scott, Temple (reelected), councilor from fifteenth district, Dr Charles E Seale, Daingerfield, delegates to the American Medical Association, Drs George H Moody, San Antonio, and Marvin L Graves, Galveston, alternates, Drs Charles M Rosser, Dallas, and Bacon Saunders, Fort Worth, and member of the Council on Legislation and Public Instruction, Dr Ben H Turner, Cleburne (reelected) Dr Holman Taylor, Fort Worth, was also reelected editor of the *Texas State Medical Journal* On the evening of May 9, memorial services were held in honor of the thirty-six members of the association who had died since the last meeting

WISCONSIN

Y W C A Infirmary—Dr and Mrs Harold C Bradley, Madison, have offered to build and completely equip three rooms to be used as an infirmary in the Young Women's Christian Association Building, Madison

State Health Conference—A conference of the field men of the state board of health was held in Madison, May 5 and 6, presided over by Dr Guy W Henika, deputy state health officer for the district, and Frank R King, state plumbing inspector

Postgraduate School Organized—At a meeting of physicians of Marshfield, the Physicians Postgraduate School of Marshfield was organized, and the following officers were elected president, Dr Karl W Doege, vice president, Dr John C Hayward, secretary, Dr Victor A Mason, and treasurer, Dr William Hipke

Personal—Dr John R McDill, Milwaukee, has been selected as surgeon in chief of two field hospitals of 500 beds each, to be established in Germany and Austria, by the American Surgeons' Expeditionary Committee Dr McDill, with forty surgeons and nurses, sails from New York, May 27, on the *New Amsterdam*——Dr Albert F Young, Wauwatosa, has resigned as house physician of the Milwaukee County Detention Home——Dr John J McShane, health commissioner of Kenosha, has been appointed director of public health of Akron, Ohio

State Surgeons Hold Meeting—The annual meeting of the Wisconsin Surgical Association was held in Milwaukee, May 10 and 11, under the presidency of Dr F Gregory Connell, Oshkosh, and the following officers were elected president, Dr Charles H Lemon, Milwaukee, vice presidents, Drs Reginald H Jackson, Madison, George W Nott, Racine, Karl W Doege, Marshfield, and Dennis J Hayes, Milwaukee, secretary-treasurer, Dr Daniel Hopkinson, Milwaukee, and member of the board of regents, Dr John F Pember, Janesville (reelected) At the close of the banquet a paper written by Major James R Scott, M C, Wis N G, Appleton, was read by Major James W Frew, M C, Wis N G, Milwaukee, assigned First Infantry, and this was followed by a discussion on the general topic of preparedness

CANADA

Grenfell Speaks—*Dr Wilfrid T Grenfell, Labrador, recently* returned from the battlefront in France, lectured in Convocation Hall, University of Toronto He spoke of the work of the Red Cross, to which he paid a high tribute, as well as to the Canadian Army Medical Corps

Hospital News—The Massey-Harris Hospital at Kingswood, England, will be opened, June 1——The Canadian Women's Club at Folkestone, England, is building and furnishing an assembly center for tuberculosis patients at Moore Barracks Hospital, England——Lieut-Col John R Spier, Westmount, Que, *has been appointed head of No 2 Canadian Hospital in France*

Personal—Prof Archibald B Macallum of the University of Toronto has been elected president of the Royal Society of Canada——Dr W Harley Smith, Toronto, writing to the Hon Mr Hanna from the Ontario Military Hospital at Orpington, England, *says it just recently received its first quota of patients—two dozen cases of incipient tuberculosis* contracted within the past six months——Dr Gordon J Ferrier, Toronto, Ont, was reported dangerously wounded on Good Friday "somewhere in France"——Dr Charles K Clarke, superintendent of the Toronto General Hospital, has been elected president of a Toronto society to promote the interests of the feebleminded

University News—Every member of the graduating class of the medical department at the Western University, London, Ont, has offered his services to the militia authorities at Ottawa for immediate overseas service if required There is a great shortage of young doctors in the field hospitals——The annual convocation of the Western University was held, May 18 Dr William J Roche, M P, Minnedosa, Mann, new chancellor of the university, delivered an address on the aspirations of the institution Dr Edward A Braithwaite, Edmonton, Alta, president of the university, outlined the progress made in the past year The following members of the profession received the honorary degree of doctor of laws Dr Hugh A McCallum, London, Ont, Dr Friend R Eccles, and Dr Walter H Moorhouse The honorary degree of doctor of science was conferred on Dr Leonard G Rowntree, professor of medicine in the University of Minnesota——Speaking at the annual meeting of the Alumni Association of the University of Toronto, held last week President Falconer stated that the war had taken over 2 500 graduates and undergraduates of the university into active service.

GENERAL

Anesthetists to Meet.—The second annual meeting of the Interstate Association of Anesthetists will be held in the Hotel Seelbach, Louisville, July 25 to 27, in conjunction with the meeting of the National Dental Association Dr F Hoeffer McMechan, Avon Lake, Ohio, is secretary-treasurer of the association

Instruction Camps for Medical Reserve Corps Abandoned—Owing to the withdrawal of troops from their regular stations for duty *on the Mexican* border, the War Department has been compelled to abandon the camps of instruction for officers of the Medical Reserve Corps that were to be held during the coming summer

Harvard Unit Sails for Europe—The Cunarder *Andani* which sailed on May 20, had aboard fifty-seven of the Harvard Unit, bound for the Western battle front, among them being Drs Hugh Cabot, George C Shattuck, Charles W Peabody, Lyman S Hapgood, Edward M Harding, Dennis R W Crile, Allen Greenwood and George M Sheahan

Hygiene and Public Baths—At the annual meeting of the American Association for the Promotion of Hygiene and Public Baths, held in Baltimore, May 9 and 10, Dr Simon Baruch, New York, was reelected president, J Leonard Mason, Newark, N J secretary, August P Windolph, New York, treasurer, and Dr Joseph E Gichner, Baltimore, was elected vice president

Southern Medical Association Meeting—Plans for the tenth annual meeting of the Southern Medical Association to be held in Atlanta, November 13 to 16, were discussed at a meeting of the local committee of arrangements, Dr Seale Harris Birmingham, Ala, secretary of the association, and editor of its official organ, and the business manager of the journal——Dr Stewart R Roberts, Atlanta, Ga, has been made general chairman of the committee of arrangements

National Tuberculosis Association Elects Officers—The National Association for Study and Prevention of Tuberculosis, at its meeting in Washington, D C, May 9 to 12, elected as president, Dr Edwin R Baldwin, Saranac Lake, N Y, as vice presidents, Dr Watson S Rankin, Raleigh, N C, and Dr James A Miller, New York, and as executive committee, Dr George Thomas Palmer, Springfield, Ill, Mr Homer Folks, New York, Mr John M Glenn, New York, Mr Lee K. Frankel, New York, and Dr David R. Lyman, New Haven, Conn

Medical Jurisprudence Association Elects Officers—The American Association of Medical Jurisprudence, at its annual meeting held in Washington, D C., May 6, elected the following officers president Mr Oscar W Ehrhorn, New York, vice presidents, Dr Philip Coombs Knapp, Boston, and Mr Bartow S Weeks, New York, secretary, Mr Charles P Blaney, New York, treasurer, Mr John C West, New York, and councilors, for the term ending 1917, Mr Raphael Tobias, New York, for the term ending 1920, Mr W O Hart, New Orleans, and for the term ending 1921, Dr William C Woodward, Washington, D C, and Mr John S Durand, New York

Bequests and Donations—The following bequests and donations have recently been announced

Presbyterian Hospital, Chicago $150 000 by the will of James Longley Boston

Guilford County (N C) Tuberculosis Sanatorium a donation of $10 000 toward a $30 000 fund for erection and equipment

Children s Memorial Hospital and United Charities of Chicago each $25 000 by the will of Bryan Lathrop

Massachusetts Medical Society $1 000 by the will of Mrs Virginia Carpenter Dedham

Mt. Sinai Hospital New York a gift of $150 000 for the endowment of a department of surgery of the stomach

National Association for the Study and Prevention of Tuberculosis a donation of $100 000 from the Metropolitan Life Insurance Company to demonstrate by community experiment the possibility of the control of tuberculosis

National Conference of Charities and Corrections—This meeting was held in Indianapolis, May 6 to 19 Pittsburgh was chosen as the place of meeting for 1917, and the following officers were elected president, Mr F A Almy, secretary of the Charity Organization Society of Buffalo, vice presidents, Mr Joseph Lee Boston, president of the Playground and Recreation Association of America, Miss Julia C Lathrop, Washington D C head of the National Children's Bureau and Rabbi Emil W Leipziger New Orleans, head of the Louisiana State Conference of Charities and Correction The program was accompanied by national exhibits in the State House, occupying three floors of the building Many other corelated conferences were held during the meeting A district branch of the conference was created in the form of the National Society of Medical Social Service Workers

Army Medical Corps Examinations—The surgeon-general of the army announces that preliminary examinations for appointment as first lieutenants in the Army Medical Corps will be held, July 17 and August 14 at points to be hereafter designated Full information concerning these examinations can be procured on application to the Surgeon-General, U S Army, Washington, D C Applicant shall be a citizen of the United States, between 22 and 30 years of age, a graduate of a medical school legally authorized to confer the degree of Doctor of Medicine, shall be of good moral character and habits, and shall have had at least one year s hospital training as an intern after graduation In order to perfect all necessary arrangements for the examination, applications must be completed and in possession of the adjutant general at least three weeks before the date of examination There will be more than 100 vacancies to be filled after July 1, when the bill for the reorganization of the army becomes a law

Wine of Cardui Suit—Since publication of the last item concerning this suit (The Journal, May 20, 1916, p 1634) the following witnesses have appeared for the Chattanooga Medicine Company in rebuttal Dr George C Amerson, Chicago, Dr Henry H Rusby, New York City, Mrs James H McFall, Sladen, Tenn, Dr Walter R. Schussler, Orland, Ill, Dr Effie L Lobdell, Chicago, Mrs John F Brownell, Franklin Parish, La, Mr Daniel Coit Campbell, Chesterfield, S C, Mr W G White, Chesterfield, S C., Mr W A Watson, Chesterfield, S C, Mr R T McCreight, Ruby, S C, Mr Spencer Sellers, Ruby, S C, Dr W J Perry, Chesterfield, S C, Dr C A Glover, Chesterfield, S C, Mr Clarence L Goldstein, Oakdale, Tenn, Mr W J Johnson, Oakdale, Tenn, Mr J H Lynch, Oakdale, Tenn, Mr H J Ellis, Ashford, Ala, Mr G M Gresham, Cottonwood, Ala, Mr H B Williams, Ashford, Ala, Mr Dow Harrelson Charleston, S C, Mr William Marbury, Sylacauga, Ala, Mrs E E Gilliand, Kellyton, Ala, Mr Arthur Hill Grimmer, Chicago, Mr Joseph A. Dickson, Heston City, Tenn, Mr Newt C Gailbraith, Sunny Point, Tenn, Mr L V McMurray Sardis, Tenn, Mr J W Hassel, Sardis, Tenn, Mr A S Montgomery, Sardis, Tenn, Mr J W Knight, Inverness, Fla, and Mr O A Pierce, Tuca, Fla Besides the above testimony, depositions were read

Conference of Boards of Health—The thirty-first annual meeting of the Conference of State and Provincial Boards of Health of North America was held in Washington, D C, May 16, following the Conference of State and Territorial Health Authorities with the United States Public Health Service While a certain overlapping in the programs and proceedings of these two conferences seems unavoidable, the fact that the Conference of State and Provincial Boards is essentially an international body has in the past given its proceedings a color not obtainable in the strictly official conference of United States health authorities with the United States Public Health Service At the recent conference, presumably owing to the unusual conditions now prevailing in Canada as a result of the war, but one Canadian province was represented

In his presidential address Dr Ennion G Williams Commissioner of Health of Virginia urged the importance of coming to some understanding as to the exact limits of the work that is to be undertaken as public health work He pointed out the predominant importance of the educational activities of public health agencies at the present time and urged their enlargement and continuance until they are taken up in a satisfactory manner by educational authorities and by private educational institutions The address suggested the advisability of cooperation between federal and state authorities or between groups of state and territorial sanitary authorities in intensive campaigns to be carried on in the several jurisdictions simultaneously against certain definite diseases in order that the efforts of any one state might not be rendered unsuccessful or diminished in their effectiveness by the introduction of disease from beyond its borders The use of salvarsan as a public health agency was urged by Dr Allan J McLaughlin, Commissioner of Health of Massachusetts who pointed out that if this remedy or some efficient substitute for it could be made generally available to all persons suffering from syphilis without reference to their ability to pay for the drug its more general use would limit the duration of the infective period of the disease in many cases in which this cannot now be accomplished and would thus tend to diminish the number of infections Massachusetts has already taken action toward this end

Officers were elected for the coming year as follows president, Dr Thomas D Tuttle, Seattle, commissioner state board of health, Washington, D C, vice president, Dr Samuel L Jepson, commissioner of health of West Virginia, and secretary, Dr Eugene R Kelley, chief of the division of communicable diseases, state department of health, Massachusetts

Conference of Health Authorities With the Public Health Service—The Fourteenth Annual Conference of State and Territorial Health Authorities with the United States Public Health Service was held in Washington, D C, May 13 and 15 Twenty-nine states and territories and the District of Columbia were represented

With a view to increased efficiency and economy of work in the field of rural sanitation and to prevent overlapping of various fields of sanitary effort the conference recommended that the surgeon general appoint a committee to define the limits of the activities that might properly be regarded as coming within the purview of the work of a bureau on rural sanitation and to define methods and standards for work in that field In order to simplify and to make uniform administrative measures pertaining to the sanitation of travel the conference recommended the appointment of a committee to study the regulations of the various states and territories for the sanitary control of travel and of common carriers and the federal interstate regulations pertaining to the same matter, and to report at the next annual conference a draft of standard regulations In so far as uniformity can be brought about in interstate and intrastate regulations, the duties of common carriers, travelers and shippers will be simplified, and the enforcement of such regulations by the authorities charged with such work will be facilitated The conference went on record as believing in the present feasibility of establishing a morbidity registration area for reportable diseases, analogous to the registration areas established by the Bureau of the Census for births and deaths, and requested that the surgeon general of the Public Health Service determine the practicability of this project and to fix standards for the admission of states and cities to such a registration area if established The appointment of a committee was recommended to formulate standard methods of recording public health data with particular reference to cost accounting by public health agencies, and of a committee to report on feasible methods of increasing the efficiency and extending the influence of future conferences As a public health measure adopted to prevent and cure pellagra, the conference endorsed the use of a properly balanced diet as the only method now known to be effective The sanitation of schools and the protection of the health of schoolchildren are, according to a resolution adopted by the conference, proper functions of health authorities rather than of educational authorities, but the latter should cooperate in the planning and execution of such work Health insurance received the formal endorsement of the conference in a resolution declaring it possible, in the opinion of the conference, for health insurance operated by governmental systems to improve the economic status, efficiency and health of individuals through better treatment of the sick, and to make disease prevention by communities, states and the nation more efficient than at present Members of the conference were urged to impress on those planning legislation looking toward the establishment of health insurance to incorporate in such legislation provisions to establish effective and close cooperation between the officials in charge of the administration of health insurance and the health officials of local, state and national government.

FOREIGN

Institute for Tropical Medicine at Granada —Dr F F Martinez, who has published several works on tropical medicine, has been appointed director of the newly organized Instituto de Medicina Tropical y Mediterranea at Granada, Spain

Physician Temporary Governor of German Province — Dr Max Bierfreund was appointed by the military authorities governor of Insterburg, his home at the time of the Russian invasion of eastern Prussia Insterburg is not far from Konigsberg threatened by the Russians He has recently published a book on his experiences, *Meine Erlebnisse als Gouverneur von Insterburg,* which has attracted considerable attention, according to our Dutch exchange

Deaths in the Profession Abroad —E Jungfleisch, professor of organic chemistry at the College de France at Paris, with a chair also at the Conservatoire des Arts et Metiers and for thirty years at the Ecole de Pharmacie ——M Straub, professor of ophthalmology at the University of Amsterdam, aged 57 He was editor of the *Nederlandsch Tijdschrift voor Geneeskunde* for the eight years ending with 1903, and was secretary of the international ophthalmologic congress at Utrecht in 1899, and has published numerous works on ophthalmology ——T Guilloz, professor of radiology at the University of Nancy, recently died a martyr to his study of the Roentgen rays, aged 48 He has contributed much to their technic and clinical application, and our Paris exchanges relate that although suffering since 1900 he organized the Roentgen-ray service for a large division of the army, and to the very last utilized his sleepless nights in promoting the welfare of the wounded and in scientific research

PARIS LETTER

Paris, April 20, 1916

The War

BLOOD VESSEL SUTURE IN WAR SURGERY

Functional troubles from alteration in the vessels are particularly frequent after traumatisms of war Dr Victor Pauchet of Amiens remarked before the Societe de chirurgie de Paris that often it is possible to make an end-to-end or lateral suture even if the vessels are separated, for the arteries are elastic The reason that the surgeon does not do so is that the procedure is delicate and tedious, and requires a scrupulous technic and a special instrumental equipment If the continuity of the vessels is reestablished, circulatory troubles are less frequent and gangrene rarer than after obliteration of the vessel This is ample argument in favor of suture, which is to be advised whenever the arterial walls and the neighboring tissues are in such condition as to permit it Pauchet showed before the Societe de chirurgie two cases of popliteal aneurysm, one arterial, the other arteriovenous, both treated by suture with recovery

Dr Souligoux of Paris does not agree with Pauchet He thinks that there are few indications for blood-vessel suture in the cases seen in the base hospitals

At the Reunion medicale de la IV-e armee, Dr Sejournet emphasized the advantages of suture for wounds of veins For wounds of large veins he rejects massive compression because it does not insure drainage and favors infection while not avoiding the risks of secondary hemorrhage His preference is for lateral suture, which decreases the caliber of the veins but slightly and reestablishes the circulation This operation demands the nicest care in order not to dislodge a clot of recent formation which may partly obliterate the orifice

Dr Brechot of Paris does not agree with Sejournet He believes that in military surgery suture of the large veins of the neck and limbs should be prohibited Under peace conditions in aseptic cases with a special technic it may produce a good functional result and the caliber of the vein may remain permeable

Dr Potherat of Paris also believes that while, in civil life, suture is advisable in certain cases of lateral wounds, especially wounds made by sharp weapons, this is not the case in military surgery While simultaneous ligature of the principal artery and of its collateral vein is more likely to produce gangrene of the limb than ligature of the artery alone, this does not mean that ligature of the vein alone will have the same consequences

Dr Schwartz of the Faculte de medecine de Paris also thinks that ligature should be preferred to suture for wounds of the veins

In answer to these objections, Dr Sejournet explained that he had in mind only partial wounds of the large veins He did not minimize the indications for ligature, but he did not believe it to be so benign or free from danger to the venous circulation Moreover, nothing in his three cases gives reason to suppose that suture was followed by the formation of an obliterating clot. No disturbance of the venous circulation occurred

RESECTION OF THE ELBOW FOR ARTHRITIS CAUSED BY A PROJECTILE

To moderate the enthusiasm of advocates of immediate or very early resection of the elbow in arthritis produced by a wound from a projectile Dr Begouin of the Faculte de medecine de Bordeaux reported before the Societe de chirurgie de Paris the results of seventeen resections of this class performed by various surgeons, which he had occasion to observe some time after the operation These results were truly deplorable In fifteen of the seventeen cases the forearm swung inertly like a flail, even during muscular efforts In the two other cases the arm was better, but quite unserviceable, neither patient could carry a spoon to his mouth, write or button his clothing Begouin believes that the good results reported hitherto were obtained, not in large series, but in isolated cases, in the hands of surgeons who are specially familiar with resection and who had sufficient time —rare now in these times of excessive overwork—to oversee the details of the necesary after-care He fears that most of the results obtained by average surgeons can scarcely be better than those reported by him If this be so, there should be no delay in recognizing that the functional results of resection of the elbow performed at this secondary period are clearly inferior to those obtained by permitting ankylosis in good position During this secondary period of the course of cases of arthritis, comprised between the third or fourth day after the patient's arrival in the base hospital and the second or third month, resection should be performed only exceptionally, if the extent of the lesions and the severity of symptoms make it necessary for saving life or limb Such cases, however, are rare, and Begouin has been impressed by the relative benignity of the cases of arthritis of the elbow that he has seen Under treatment by liberal incision, lavage, especially with hydrogen peroxid removal of fragments and careful attention, with curettage finally in some cases, uncomplicated recovery has occurred in all cases, with ankylosis as a final result much superior to the swinging forearm mentioned previously

Professor Quenu believes that Begouin's warning is timely but should not be exaggerated, especially since the swinging forearm is not an incurable infirmity, but may be corrected without great trouble The question of the superiority of ankylosis over the mobility given by resection is another matter, the cases should be classified according to the patient's occupational requirements as to whether strength is needed rather than mobility or vice versa.

Dr Routier of Paris agrees with Quenu, although he himself has never performed resection of the elbow during suppuration. It should not be forgotten, moreover, that the swinging forearm bears at its end a hand, which is worth more than the best orthopedic apparatus furnished after amputation.

Dr Broca of the Faculte de medecine de Paris believes the results of arthrotomy with removal of fragments to be better than those of resection in traumatic arthritis of the elbow. He agrees with Begouin that generalization should not be too sweeping in these cases.

Professor Hartmann does not believe that systematic resection is indicated in suppurating arthritis of the elbow. His patients have recovered under treatment by drainage combined with removal of fragments and immobilization of the elbow, which is always possible, no matter what the extent of the wounds, with a plaster splint. The reason that good results have not always been obtained in suppurative arthritis of the elbow is that immobilization has not been combined with drainage, this immobilization is a necessary feature. It is true that recovery under such conditions leaves the patient with an ankylosis, but if the arm is in good position it gives the patient a firm elbow which is sufficient for the requirements of many callings, even that of a soldier. If the patient later in civil life, desires to take up a vocation requiring a movable elbow rather than strength, there is nothing to prevent a secondary orthopedic resection.

TREATMENT OF SUPPURATIVE ARTHRITIS RESULTING FROM FIREARM WOUNDS

The Societe de chirurgie de Paris continuing the discussion on resections in arthritis, Dr Auvray of the Faculte de medecine de Paris brings forward statistics of twenty-eight cases of suppurative arthritis of the elbow which he has had occasion to treat since the commencement of the war. He has often sought to obtain, by resection, a better drainage of the articulation than could be obtained by arthrotomy alone in some cases. He feels sure that he has been able, by resection, to save many limbs and several lives.

Professor Kirmission is of the opinion that early resections for extensive crushing fractures of a joint ought to be practiced only as operations of necessity in order to search in all the remote corners for bony fragments or separated portions of soft tissues. Numerous wounded men have been rendered cripples, with dangling limbs, forever dependent on orthopedic apparatus, because of such imperfectly performed operations. For such persons an ankylosis in good position would have been preferable. Secondary resections are done to give a free exposure for the purpose of combating the suppurating arthritis and the grave septicemia which the latter often provokes. But, here, again, antiseptic dressings properly applied and especially, rare (sic) dressings, free exposure and thorough drainage suffice in the majority of cases to effect a cure. For his own part, while he has had a large number of crushing articular fractures and cases of suppurating arthritis of the elbow, of the shoulder and of the knee, Kirmisson has been able to obtain cures though he has never performed resection in these cases. Late or orthopedic resections in war surgery have all the value that they have in civil surgery, and are capable of yielding the best results. It is especially at the elbow that orthopedic resection is most useful and most frequently indicated. Dr Picqué, surgeon of the hospitals of Paris, shows by his personal experience the necessity and advantages of immediate treatment of joint wounds in the ambulances at the front, in the same way as injuries of the long bones, of the skull, of the chest and of the abdomen. This treatment should, above all, be prophylactic and conservative. Arthrotomy is the first step. By it access to the joint is obtained and the opening must be large enough to permit of exploration. In the rare cases of simple synovial lesions it will suffice and its nonsuccess in other cases is sufficiently explained by the coexisting bony lesions. Arthrotomy in these cases is but the prelude to an operation on the bone. What form should this latter take? The surgeons of Lyons are frankly in favor of typical resections. Their colleagues of Paris more generally prefer atypical resections. The latter may be anything between a simple cleaning out and an extended resection of the whole of the articular extremity of the bone, determined naturally in each case by the extent of damage. Conservative treatment may also be attempted by such an atypical resection not only in the case of a wounded man who arrives at the ambulance a few hours after the receipt of his wound but also when he comes under observation during the first days, though already suffering from a suppurating arthritis or a threatening septicemia, but in this case the vigilance of the surgeon must always be maintained, in order to detect in the course of frequent dressings the earliest indications for a more radical intervention. Conservative policy becomes dangerous as soon as the surgeon relaxes his guard. Indeed, in many cases, it should be but the prelude for a more energetic attack on the condition, in the course of which total extensive resection, supplemented by the usual counteropenings for drainage, may be practiced in accordance with the well-established rules of operative technic. Finally, when with judicious local treatment and the utmost subsequent care, the infection fails to be localized, one must not await septicemia before amputating. Partial resection, total resection and amputation must be substituted one for the other, successively, to meet the dangers, respectively, of arthritis, of septicemia and of death.

MORE RATIONAL UTILIZATION OF THE SERVICES OF MEDICAL STUDENTS

The minister of war lately received a delegation from the medical group in parliament, which demanded better employment for medical students, who ought to be used as technical assistants and not as mere nurses. The delegation also demanded that the students should be grouped under the name of *élèves aspirants du Service de Santé* near a hospital where they should receive special instruction and, after examination, the title of *aspirants*.

THE EVACUATION OF HOSPITALS NOW LODGED IN HIGH SCHOOLS

The Association des parents d'eleves des lycees de Paris has just passed a resolution demanding the removal from school buildings of the military hospitals that might be lodged in other convenient buildings. The resolution mentions the pedagogic, hygienic and moral disadvantages, the dangers of contagion, the crowding of classes, etc, which result from the prolonged lodgment of hospitals in high school buildings.

Social Hygiene Dispensaries

A law has just been passed establishing public dispensaries for social hygiene and for antituberculosis compaigns to be carried on by means of education, and advice on prophylaxis and hygiene, as well as by assuring institutional care to those ill with infectious diseases. Further when necessary, the dispensaries will place their services at the disposition of the public for disinfection of clothes and other materials as well as dwelling houses and other places which have been infected. For the indigent sick they arrange free consultations and distribution of medicine. They may place their services at the disposal of mutual benefit societies and charitable organizations.

LONDON LETTER

London May 8, 1916

The War

THE NEW BRITISH HELMET AS A PROTECTION AGAINST HEAD WOUNDS

On the Allied side the French were the first to adopt a steel helmet in consequence of the large number of wounds of the head. The British then devised a helmet which has not the surprising lightness of the French but it is considered to be better designed to meet its purpose. It has a wide downward sloping brim, and thus protects the side and back of the neck and the temples and upper part of the face as well as the top and sides of the head. This breadth of brim makes the crown look shallower than that of the French helmet, but a more real difference is that the British helmet has a smooth round top, while the crown of the French presents a prominent ridge tapering centrally backward. This ridge was originally intended to strengthen the helmet, but being hollow and open at one end it also provides a means of ventilating its interior. In addition it adds to the head dress a style that the English helmet lacks. But it is open to question whether these advantages are not outweighed by the fact that a fragment which would glance harmlessly off the smooth round British crown might be stopped by this ridge on the French helmet, and inflict on the wearer a stunning jar if not worse. The British helmet stands away from the head about one third inch all round the weight being borne by a padded leather band fixed to the inner side of the surrounding steel by a series of india rubbia buffers each about the thickness of a lead pencil and about 1 inch long. This detail constitutes perhaps the most important difference between the British and French helmets The buffers are capable of diffusing and neutralizing the force of a blow which, falling on the closely fitting French helmet, would be conducted direct to the brainpan The heaviness of the British helmet is a drawback Possibly its protective effect would be increased by lowering the brim still further so as to guard against bomb fragments or other missiles rising upward from a point within a yard or two of the wearer The experience of recent wars shows head wounds amounting to 15 per cent , but recent data of the present trench warfare show a percentage of about 25 The introduction of helmets was followed by a considerable reduction The cases at one clearing station were analyzed, and it was found that penetrating gunshot wounds of the head formed only 0 5 per cent, while the total fractures of the skull were under 1 per cent Moreover, there was the direct evidence of the helmets of men who had been struck on the head by missiles of various kinds, but who sustained no injury more serious than a scalp wound Indeed, some men whose helmets had been dented or pierced or broken were not even aware they had been struck Though the helmets were by no means bullet proof they commonly offered such resistance that a missile which penetrated them lost most of its force

MILITARY ORTHOPEDICS

One of the new features of army medical organization is the extent to which the War Office has used specialists of all kinds Our leading orthopedic surgeon, Mr Robert Jones has been appointed inspector of military orthopedics He has been surgeon to the military orthopedic center at Alder Hey Military Hospital, near Liverpool, since its establishment He is also a member of the staff of the hospital at Roehampton for men who have lost a limb in the war This is a special hospital for men who have undergone amputation of a limb Accommodation is provided for 300 The men are retained until the artificial limbs they need have been made and adjusted under the supervision of the experienced staff of orthopedic surgeons A hospital on similar lines is being established in Glasgow, where the same system of supervision and construction of artificial limbs on the spot will be followed Cases of this class are being reported at the rate of 300 a month In addition to the men who have undergone amputation there are among those returning from abroad to military hospitals at home many cases of injuries of limbs, especially of joints, varying in severity but all more or less interfering with the ability to work in civil life Recognition of the fact that these men can be greatly benefited by skilled orthopedic treatment begun as early as possible is shown by the appointment of an inspector of military orthopedics, who will exercise general supervision of the treatment of orthopedic cases in the various military hospitals and sections of hospitals, and arrange for the transfer of suitable cases to selected centers of orthopedic treatment The types of cases which will come within the scope of the scheme are (1) derangements and disabilities of joints, including ankylosis, (2) malunited and ununited fractures, (3) injuries to ligaments, muscles and tendons, (4) cases requiring tendon transplantation or other measures for irreparable destruction of nerves, (5) nerve injuries by fractures or stiffness of joints, (6) certain complicated gunshot injuries to joints, and (7) cases requiring surgical appliances The Hammersmith Military Hospital (in London) will be the first military orthopedic hospital to be organized under the supervision of the inspector of military orthopedics The buildings consist of the Hammersmith Infirmary and Workhouse, and will hold a total of about 800 men In addition to the ordinary surgical orthopedic service, there will be departments for treatment by massage and mechanotherapeutics, electric treatment, and radiant heat, whirlpool and other forms of baths, each in its own quarters There will also be a large and well fitted gymnasium The workshops of the buildings are large, and it is hoped to be able to fit them in such a way that all splints, surgical appliances, special boots and instruments, etc, may be made on the premises Special accommodation is to be made for plaster-of-Paris work, including the taking of plaster-of-Paris casts The staff of the hospital, apart from the administrative officers, will consist in the first place of four surgeons, a consulting neurologist, physicians in charge of the massage, electric and balneologic departments, Roentgen-ray specialist, anesthetist, gymnastic instructor, and four resident medical officers

THE SUPPLY OF MEDICAL OFFICERS FOR THE ARMY AND NAVY

A considerable number of physicians are still required for service in the army medical corps The development of military operations has caused a large proportion of the medical officers who have hitherto been serving in this country to be detailed for service abroad, and it is essential that there should be others ready to meet future demands This request for officers has come before the enrolment scheme (described in previous letters to The Journal) of the Central Medical War Committee has been completed The committee is therefore compelled to ask for volunteers from among both the enrolled and the unenrolled The present condition is well described by Sir Clifford Allbutt and Sir William Osler in a letter to the *Lancet* During the next few weeks the course of events seems certain to lead to renewed fighting, to many casualties, and to a call for more and more physicians to tend the sick and wounded The supply could be met—as, if other methods fail, doubtless it would be met—by conscripting physicians, but some time ago the War Office recognized that a scheme of voluntary enrolment could be made to give them what they wanted and in a better way The working of the scheme was entrusted in England and Wales to the Central Medical War Committee, a committee representing the profession at large and the several medical corporations and schools, and in close touch with the insurance commission and the great government departments which employ physicians This scheme of voluntary enrolment, as contrasted with conscription, appears to present certain great advantages, in which both the community and the physician share In any circumstances some physicians must go, and some be kept at home, but whereas with conscription the task of selection might fall into the hands of local lay tribunals, the voluntary scheme provides that in each district it falls to a local committee of physicians whose knowledge of the profession and of local conditions enables them to form a better judgment both of the needs of the civil community and the difficulties of the individual physician This scheme has been framed to secure also a due rotation of work and sacrifice, so that when the volunteer has completed the year of service for which he signs, he is free to return home, his place in the army being taken by another, an arrangement fairer to himself and better for his civil patients than indiscriminate compulsion Now the success of the scheme obviously depends on the number of enrolments If the response is meager the army medical department will be starved, or rather conscription must come Moreover, the correlative provision for the civil population and the fair distribution of sacrifice will be imperiled It is true that the response so far has been fair, but with the spring campaign on us, the need for more men, and yet more, is so pressing that there is considerable anxiety even in respect of the immediate future The scheme can work well only if all, or practically all, physicians of suitable age enroll themselves However, not unnaturally, some are hesitating to enroll lest a lack of enrolments should expose them unfairly to be summoned This cannot, in any case, happen, since the committee has decided that no calls shall be made until 75 per cent are enrolled Every physician of military age is therefore urged to enroll

Marriages

John Moore Conway, M D, Pittsburgh, to Miss Theresa Straitiff of McCalmont township, Jefferson County, Pa, recently

Walter H Parcels, M D, Lewistown, Pa, to Miss Mary B Cummings of Readsville, Pa, at Atlantic City, N J, May 11

Herman H Dight, M D, Titusville, Pa, to Miss Lucille Walker of Emlenton, Pa, at Brookville, Pa, May 4

Carl Schumann, M D, Greene, N Y, to Miss Alice C Selle of Akron, O, at Warrensville, O, May 17

Henry Barber Richardson, M D, Boston, to Miss Margaret Carpenter of New York City, May 2

Nicholas August James, M D, to Miss Mabel Elisbeth Becker, both of Tell City, Ind, recently

Russell Bower Lynn, M D, Elmira, N Y., to Miss Ethel Isabell Raul of Easton, Pa, May 17

Homer P Yeater, M D, Maysville, Mo, to Mrs Essie Welsh of St Joseph, Mo, April 24

Howard Elmer Campbell, M D., Anita, Ia., to Miss Anna Laura Smith of Ames, Ia, May 10

Arthur Raymond Moon, M D, to Miss Beatrice Clark Jackson, both of Detroit, May 8

Deaths

William W Reed, M D, Jefferson, Wis , College of Physicians and Surgeons, Keokuk, Ia , 1863, aged 91, for many years a Fellow of the American Medical Association, a member of the State Medical Society of Wisconsin, for four years a member of the General Assembly, eight years state senator, twelve years mayor of Jefferson, health officer of Jefferson and Jefferson County for about thirty-six years, and for twenty years a member of the State Board of Charities, an active practitioner for sixty-six years, died at his home, May 10 In 1909 the Jefferson County Medical Society gave a banquet in honor of Dr Reed to celebrate the sixtieth anniversary of his arrival in Jefferson and on this occasion presented Dr Reed with a silver loving cup

John D Zwetsch, M D, Gowanda, N Y , Cleveland University of Medicine and Surgery, 1882, aged 57, a member of the Medical Society of the State of New York, formerly a Fellow of the American Medical Association, local surgeon at Gowanda for the Erie Railroad, a member of the consulting staff of the Gowanda State Hospital, and a member of the International Association of Railway Surgeons, was instantly killed by the overturning of his automobile near the Gowanda State Hospital, May 6

Edward Leaming, M D, New York City, College of Physicians and Surgeons in the City of New York 1892, aged 54, a Fellow of the American Medical Association and Royal Photographic Society, professor of photomicrography in the department of pathology of his alma mater and the Rockefeller Institute, president of the Roentgen Society of New York, visiting roentgenologist to Roosevelt Hospital, an expert in roentgenology and photography, died at his home, May 11

James Ross, M D, Halifax, N S , McGill University, Montreal, 1890, aged 48, lieutenant colonel C A M C , for many years editor of the *Maritime Medical News* which was amalgamated with the *Canadian Medical Association Journal*, extra-mural lecturer on dermatology and genito-urinary diseases in Halifax Medical College, surgeon to the Dermatological Department of Victoria General Hospital, died suddenly, May 8

James Robert Jones, M D., Winnipeg, Man , University of Toronto, Ont. 1878, L R. C P, London, aged 67, professor of theory and practice of medicine in Manitoba Medical College, Winnipeg, physician to the Winnipeg General Hospital and president of the College of Physicians and Surgeons of Manitoba, died in St Paul, Minn, January 11, from cerebral hemorrhage, secondary to arteriosclerosis

Victor Alexander Bles, M D, Denver, University of Colorado, Boulder, 1895, aged 43, a Fellow of the American Medical Association, formerly assistant to the chair of neurology of St Louis University and assistant neurologist to St John's Hospital, later a member of the staff of the Elgin State Hospital, died in St Luke's Hospital, Denver, May 9, from tuberculosis

Joseph S Baldwin, M D., Freeland, Md , University of Maryland, Baltimore, 1874, aged 69, sanitary officer of the Sixth District of Baltimore County, for many years a practitioner of Elko, Mo , died, May 6 in the James Buchanan Brady Institute, Johns Hopkins Hospital Baltimore, from malignant disease, for which operation had been performed seven days before

Abner Howard Powers, M D, Boston, Boston University School of Medicine, 1885, aged 60, professor of surgery in his alma mater, surgeon in chief and dermatologist to the Homeopathic Medical Dispensary and medical director of the Medical Mission Dispensary Boston, died at his home, May 13, from injuries received in an automobile collision a month before

William Rufus Hedgpeth, M D., Paso Robles Calif Missouri Medical College, St Louis, 1891, aged 60, a Fellow of the American Medical Association, formerly local surgeon to the Southern Pacific System, a well known specialist on diseases of the eye ear nose and throat, died at his home, April 22, from angina pectoris

N Noble Vance, M.D, Bement, Ill , Medical College of Ohio, Cincinnati, 1868, aged 71, formerly a member of the Illinois State Medical Society and one of the organizers of the National Association of Railway Surgeons, a veteran of the Civil War, for more than forty years a practitioner of Bement, died at his home May 10 from cerebral hemorrhage

William H Sparling, M D, Moweaqua, Ill , Detroit College of Medicine and Surgery, 1872, aged 66, a Fellow of the American Medical Association, and formerly president of the Central Illinois District Medical Society, local surgeon to the Illinois Central system, a member of the National Association of Railway Surgeons, died at his home, April 3

Auren Alfred Stafford, M D, Alameda, Calif , Cooper Medical College, San Francisco, 1896, aged 46, a Fellow of the American Medical Association, formerly president of the Alameda Board of Health, physician to the German Old Peoples Home of California, died at his home, May 7

Willis Edward Crane, M D, Hamill, S D , Rush Medical College 1879, aged 59, formerly a member of the South Dakota State Medical Association, died at his home, April 6, from the effects of a gunshot wound of the head, self-inflicted, it is believed, with suicidal intent

Oliver Henry McMichael, M D, Minneapolis, University of Michigan, Ann Arbor, 1871, aged 70, a Fellow of the American Medical Association, a practitioner of Vernon Center Minn for forty-three years, died at the home of his daughter in Minneapolis, May 10

Herbert Lucius Hulburd, M D, Morris, Minn , Long Island College Hospital, Brooklyn, 1875, aged 64, a Fellow of the American Medical Association, physician to the Government Indian School and Hospital, Morris, Minn , died at his home May 13, from septicemia

John Robert Everitt, M D, Jersey City, N J , Long Island College Hospital, Brooklyn, 1872, aged 69, surgeon to the Jersey City and Emergency hospitals, for thirty years a member of the Jersey City Board of Health, died at his home May 15, from diabetes

James Scott, M D., Portland Ore , State University of Iowa, Iowa City, 1873, aged 72, for many years a practitioner of Grant, Ia , but for the last four years a resident of Portland, Ore , died suddenly in a bank in Albany, Ore, May 10 from heart disease

Francis William Campbell, M.D, Brooklyn, College of Physicians and Surgeons in the City of New York, 1909, aged 31, visiting anesthetist to St Catherine's Hospital, Brooklyn, and gynecologist to St Catherine's Dispensary, died at his home, May 9

Charles S Meahl, M D, Buffalo, N Y , University of Buffalo, 1890, aged 47, city diagnostician of Buffalo and for many years a city examiner in lunacy, died at his home April 17 from cirrhosis of the liver associated with pulmonary tuberculosis

Norman James Lang Yellowlees, M D, Toronto, Ont , University of Toronto, 1909, aged 29, captain in the Canadian Army Medical Corps and on duty with the University of Toronto Base Hospital, is reported to have been accidentally drowned at Saloniki

Manfred Robert Martin, M D, Vernal, Utah, College of Physicians and Surgeons, Chicago, 1904, aged 36, a member of the Utah State Medical Association, died in the Garfield Park Hospital, Chicago, May 8, from heart disease associated with diabetes

Willis W Barnes, Louisville, Ky , (license Kentucky 1903) aged 63, a practitioner since 1882, also a dentist and professor of dental surgery in the University of Kentucky Medical Department, died at his home, March 1, from endocarditis

Isaac Newton Power, M D, Cle Elum Wash , Willamette University, Salem Ore 1877, aged 64, formerly a Fellow of the American Medical Association, a member of the local board of education, died at his home, May 6, from pneumonia

Albert Wickman, M D, Newark, N J , New York University New York City, 1894, aged 48, a Fellow of the American Medical Association, physician to the Newark General Hospital, died suddenly at his home, May 13, from heart disease

Edward A Fox, M D., Cincinnati, Medical College of Ohio Cincinnati 1905, aged 34 local surgeon to the Big Four System, physician to the Hamilton County Infirmary in 1909 and 1910, died at the Bethesda Hospital, Cincinnati, May 7

Vincent West McNeill, M D, Prospect, Ohio, Starling Medical College, Columbus, 1892 aged 45 also a graduate in pharmacy, formerly a member of the Ohio State Medical Association died at his home May 12 from uremia

Johnson W Pettijohn, M D, Hoyt Kan , Georgetown University, Washington D C., 1864, aged 82, a member of the Kansas Medical Society and a pioneer practitioner of Hoyt, died at his home near that place, May 14

Robert G Schaller, M D, Alton, Ill , University of Munich, Bavaria, 1889, aged 66, formerly a Fellow of the American Medical Association, a member of the Illinois State Medical Society, died suddenly at his home, May 11

James Edwin Weller, M D, Richmond, Ind , Jefferson Medical College, 1901, aged 41, a member of the Indiana State Medical Association, a surgeon of volunteers during the war with Spain, died at his home, May 10

Arad A Simons, M D, Cloverport, Ky , University of Louisville, Ky, 1892, aged 57, a Fellow of the American Medical Association, surgeon to the Henderson and St Louis Railroad, died at his home, May 7

Henry L Donsife, M D, Frederick City, Md , University of Maryland, Baltimore, 1864, aged 73, died in the Montevue Hospital, Frederick, May 10, from shock from scalds believed to have been accidentally received

John F Hanifin, M D, Holyoke, Mass , College of Physicians and Surgeons, Baltimore, 1911, aged 30, a member of the Massachusetts Medical Society, died in Saranac Lake, N Y, May 7, from tuberculosis

Stephen Elvaro Webber, M D, Calais, Me , Harvard Medical School, 1894, aged 55, a Fellow of the American Medical Association, died at his home, January 11, from chronic interstitial nephritis

Pierre Valance Roudiez, Denver, (license Colorado, 10-year clause, January, 1891), aged 81, surgeon of volunteers during the Civil War, died at his home, May 13, from pneumonia

James D Peters, M D, Renton, Wash , Eclectic Medical Institute, Cincinnati, 1868, aged 80, *for more than forty* years a practitioner of Grand Rapids, died at his home, April 13

Marcus Barclay Dwight, M D, Philadelphia, Jefferson Medical College, 1875, aged 64, a member of the Medical Society of the State of Pennsylvania, died at his home, May 8

William Merrill Bullard, M D, Flatbush, Brooklyn, N Y , University of Gottingen, Germany, 1867, aged 74, died at the home of his daughter in Brooklyn, May 12, from heart disease

Daniel E Evans, M D, Nanticoke, Pa , Baltimore University, 1892, aged 66, formerly a member of the Medical Society of the State of Pennsylvania, died recently at his home

Adam Ramsey Insley, Little Rock and Redfield, Ark , (license, Arkansas, 1903), aged 80, a veteran of the Civil War, died at his country home at Redfield, April 27

Samuel W Sigler, Warren, O , (license Ohio, 1899), aged 78, for more than fifty years a resident of Niles, O , died at his home in Warren, May 12, from uremia

Ludwell Yancy Browning, M D, Mays Lick, Ky , University of Pennsylvania, Philadelphia, 1866, aged 75, died at the home of his son near Elizaville, Ky, April 29

Joseph Rowe Webster, M D, North Lexington, Mass , Harvard Medical School, 1859, a member of the Massachusetts Medical Society, died at his home, May 9

Joseph N Charbonneau, M D, Worcester, Mass , Victoria University, Toronto, Ont, 1874, aged 65, died at his home, February 9, from valvular heart disease

William Henry Hoyt, M D, Wenham, Mass , New York University, New York City, 1886, aged 53, formerly of Sioux City, Ia , died at his home, May 3

Thomas S Gibson, M D, Alexandria, Va , University of Maryland, Baltimore, 1887, aged 56, died at his home from cerebral hemorrhage, April 26

Edward Milton Duff, M D, Hollidaysburg, Pa , University of Pittsburgh, 1892, aged 49, died in his office, May 4, from cerebral hemorrhage

John Huntington Van Kleeck, M D, Brooklyn, University of Buffalo, 1872, aged 67, died at his home, May 2, from pneumonia

George Washington Morgan, M D, Keener, Ala , University of Tennessee, Nashville, 1889, aged 60, died at his home, April 30

Isaac Cheney McCoy, M D, Fort Worth, Texas, Medical College of Georgia, Augusta, 1870, died at his home, April 29

Sheldon S Thayer, M D, Paisley, Ore , University of Oregon, Portland, 1899, died at his home, April 15

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

THE WINE OF CARDUI SUIT

(Continued from page 1649)

May 2, 1916, Morning

TESTIMONY OF DR NATHANIEL H ADAMS

Dr Nathaniel H Adams was called as a witness for the defendants

DIRECT EXAMINATION BY MR T J SCOFIELD

Dr Nathaniel H Adams testified that he resides in Oak Park, Ill, and has an office in Chicago He has been practicing medicine for twenty years He was graduated from the Northwestern University Medical College in 1896 He taught in the Illinois Medical College, the Chicago Dental College, and has attended patients in various hospitals for ten or fifteen years He taught chemistry for fourteen years and anatomy for three He is a member of the Chicago Medical Society, Illinois State Medical Society, the American Medical Association, and the Therapeutic Club He has done a general practice until within the past few years in which he has specialized somewhat in nervous diseases His treatment has been almost exclusively medical, and surgical cases have been referred elsewhere He knows of cnicus benedictus, but has never used it as a medicine He has had much experience with viburnum prunifolium, which he has used in various forms This experience has been that used alone it has no medical value If it is associated with an active drug it does not seem to add or detract from the potency of that drug

Q —In other words, if I understand you, you don't see any benefit—or have had no benefit from it either alone or in combination? *A* —Not from a drug standpoint, no sir

Q —Now, explain, doctor, what you mean by that, "not from a drug standpoint" *A* —I mean this, that I have been disappointed in the use of the drug for any therapeutic value I will say, however, that black haw has a clean bitter taste, and that this clean bitter taste with the slight flavoring of valerianic acid which is present, that it makes it a modifier of other tastes It is a drug that can be used in combination for the sake of its flavor and for the sake of adding a clean bitter to nauseous drugs, without having any medicinal value itself

The witness was then asked as to whether he had any opinion as to the value of a hypothetic medicine similar to that about which other witnesses were questioned

Q —Doctor, is there any ingredient as described, or ingredients, aside from the alcohol in this solution, that, in your opinion, would prevent the preparation being used in larger doses than in table spoonful doses *A* —In my opinion, this preparation contains a simple herb and a simple bark, which are not potent, which have no strong medicinal value and are not poisonous For that reason there is nothing in these two drugs to prevent the taking of this medicine in increasing doses for its alcoholic effect.

The witness was asked to distinguish between the cure and relief of various conditions, using as an example the treatment of a syphilitic ulcer of the cervix

Dr Adams then defined the word "tonic" He would not give a tonic for the cure of uterine prolapse, gonorrhea, uterine retroflexion, or an uterine inversion Tonics are rarely necessary in the treatment of such conditions

Ergot, pituitrin and hydrastis might be considered uterine tonics, he said He then described the way in which ergot acts as a uterine tonic

There was described to the witness an experiment similar to that performed by Dr J Clarence Webster, and he stated that a drug injected into the uterine wall which would produce no observable effect within ten minutes would be an inert drug It is not a uterine tonic or a uterine sedative

The witness then stated that the official fluidextract of ergot contains approximately 50 per cent of alcohol, and that amount is required to extract the virtues and preserve the preparation

Q —Doctor is there any disadvantage in using 50 per cent of alcohol as you find it in the fluidextract of ergot? *A* —Yes indeed there is

Q —What is it? *A* —Why the disadvantage—there are several disadvantages One is that ergot is nearly always used hypodermically and alcohol is an irritant in that use Then again, alcohol is a direct antagonist to the proper action of ergot. Alcohol tends to relax the vessels of the womb, and the action of ergot which is sought is to contract them The drug value of the fluid of ergot however is great enough to overcome the disadvantage of the presence of alcohol So if the fluidextract of ergot is used, you have to tolerate the bad effects of the alcohol for the good effects of the ergot

Q —Now doctor is that the reason that you use the ergotin instead of the fluidextract? *A* —Yes.

Q —In what dose when you use the fluidextract of ergot in what dose do you prescribe it? *A* —Ordinarily half a teaspoonful

Q —Under what conditions and under what circumstances do you prescribe the fluidextract of ergot? *A* —In the great majority of cases it is prescribed after childbirth to shut down the womb tighten the womb so that the blood will be squeezed out of it. It favors involution of the womb

Q —To what extent do you use it, under such circumstances how long? *A* —One dose as a rule following delivery

Q —Did you ever give it in a tablespoonful dose? *A* —Never in my life.

Q —Why? *A* —Why, that is tonic that is a poisonous dose, verging on a dangerous dose.

There was then read to the witness an advertisement from the New Orleans *Picayune* similar to those read to previous witnesses He stated that the hypothetic medicine corresponding to Wine of Cardui is not an absolutely natural vegetable food tonic for starved female functions The statements in the advertisement he considers absolutely false and vicious as leading to false hope

He described the way in which a bitter might be considered a tonic, but stated it could not be considered restorative He regards alcohol as an exhilarant and not a tonic He considers it absolutely detrimental in cases of inflammation of the pelvic organs of the female He considers that alcohol in the strength mentioned would brace up a patient suffering from some form of uterine displacement, the exact nature of which was not known, and that after the bracing effect there would be depression so that there would form a tendency toward increasing the frequency and the amount of the dose

Dr Adams then described the various reflex effects on the breasts of tumors of the womb, pregnancy, etc There was read to him from the Home Treatment of Female Diseases, 1912 Edition, an article under the general subject of the female breasts Dr Adams mentioned some of the various diseases of the reproductive organs in the pelvis as well as local conditions in the breasts which are evidence of disease It was his opinion that the use of this medicine would be to mask these conditions, not to relieve them

ALCOHOL AT PUBERTY

Dr Adams then described the condition of puberty He considers it a natural physiologic condition, and stated that a young girl in good health does not require any medicine at that time.

He was asked as to his opinion of the advice that the hypothetic medicine could never do anything but good if taken by a girl at puberty He stated that the recommendation is vicious and the advice is outrageous

CROSS-EXAMINATION BY MR HOUGH

Q —You are the Nathaniel H Adams who testified in the Jiroch case in Washington are you? *A* —I am the man who went to Washington for the attorney in that case to help him in regard to drug matters

Q —That was in April 1914? *A* —I think that is right.

Q —You testified in that case that treatment by mail was a proper legitimate way to treat didn't you? *Q* —No I testified as to the value of drugs and I testified that the drugs which they used were good drugs and all right and that if they were able to make a diagnosis by—in that manner that such drugs could be properly used.

Q —You testified that they would be entitled to form an opinion from the symptoms given by a patient by mail or over the telephone or any other way? *A* —I testified that that would be one of the methods by which they might make a diagnosis yes.

Q —You testified that viburnum prunifolium was a good remedy for uterine troubles did you not? *A* —No I don't remember that I think there was a preparation of Parke Davis tablets

Q —What was that answer? *A* —There was a preparation of Parke Davis tablets some of which contained viburnum prunifolium with other drugs. There was no viburnum prunifolium alone to my knowledge.

Q —Did you not testify that the fluidextract of viburnum prunifolium was recognized medicine for these conditions? *A* —The fluid extract?

Q —Yes *A* —Not to my knowledge, no sir It was a matter of tablets They were compound tablets, they were not viburnum alone

Q —What were they compounded with? *A* —I have forgotten

Q —You manufactured 'patent medicines" at one time yourself didn't you? *A* —I never manufactured "patent medicines," but I have manufactured proprietaries which were used by physicians.

Q —When was that? *A* —Well for many years I was in the drug business and I am a graduate of the College of Pharmacy and I was quite interested in the combination of various drugs and bringing out the best value of various drugs and I was also interested commercially in trying to make compounds which would be of use to physicians and compounds for which I could get a sale from which I could make a living by their real value and merit

Q —You manufactured some for home treatment, did you not? *A* —For home treatment?

Q —Yes A —Not myself, no, sir I may have done so in other drug stores where I was employed I may have manufactured them for druggists, but not for my own self

Q —You were being examined with reference to symptom blanks and advertisements of the Dr Jiroch Company were you not at that time? *A* —Well, in this hearing before the Master, it was a hearing—

Q —It was before the Attorney General and in the Postoffice Department in Washington, was it not? *A* —Yes that is right

Q —And was a proceeding for the alleged misuse of the mails? *A* —Well I went there to testify as to my knowledge of drugs

Q —You testified that that way of prescribing was legitimate and proper didn't you? *A* —No I testified that it was a method by which they could prescribe but I did not testify that it was the best method or a good method, or the method employed by me

Q —I am not asking you whether you said it was the best method I am asking you whether you said that it was a legitimate method? *A* —No I did not use that term

Q —What did you say about that? *A* —I said— I stated that a physician could give drugs for the treatment of disease when the symptoms were thoroughly described to him, sufficient for him to make a diagnosis and I stated that that might be applicable under certain circumstances I stated it was not my method and I did not consider it a good method, and it was not one in ordinary use. My object there was to testify as to the value of these drugs

Q —Did you state this

For instance it is possible and practicable for a doctor to treat many patients in the space of an hour or two who comes to his office and he will often accept their statements, and he may even accept their statements over the telephone For instance it is a common every day practice for some one to call up and say 'I have a cold or a headache or I am vomiting' or some thing like that tell us something to do' That is done over the telephone. That is not the ideal but it is the practical method A busy man will run into the office perhaps a lawyer and will say I have to go out on an argument this afternoon My head is throbbing give me something for it' We do not go over the man's body very much but give him something to meet the symptoms. That is ordinary practice and we could not be in business if we did not do that sort of thing Did you make that statement? *A* —Oh I think I did it sounds right

Q —Now on the question of cure you testified as to the meaning of that on that occasion didn't you, or do you recall. *A* —I do not recall that

Q —I will read to you from the report of your testimony In the general run of medical practice, in your treatment, when you speak of curing a disease what is the usual meaning or significance of that term? In general what is meant by that? And your answer Of course among physicians it would mean relief of the diseased condition For instance, if we cure a boil by lancing and leave a scar the word cure could only mean relief in the sense that we would have relieved the condition You stated that didn't you? *A* —I think that is very likely that physicians do not consider a cure to be a cure unless they relieve the disease unless the disease is cured

Q —You made that statement didn't you? *A* —I do not know whether I made that or not I think very likely I did

Q —In answer to Mr Dobbyns' question All I want to get at is what is generally understood by the treatment of disease? your answer was My only answer to that question is this that the object of the practice of medicine is to relieve human suffering and prolong human life and we cannot perfect the bunged up damaged machines that come to us We patch them up and try to relieve their symptoms and do to a certain extent You made that statement didn't you? *A* —Oh sure that is right

Q —And furthermore In the practice of medicine the important thing as I understand it from the standpoint of the physician is to relieve the symptoms and relieve the human suffering? And your answer is Yes sir *A* —You mean that was a question asked of me?

Q —That was a question asked of you and your reply is Yes *A* —Well that is my opinion that to relieve the human suffering is very very important if the disease cannot be relieved

Q —Well it was in that sense that you used the word cure was it not? *A* —I used the word cure only in the sense of curing the disease Otherwise it is relief or partial cure

Q —On that occasion you testified in that way didn't you that that was the sense in which you used the word cure? *A* —Th was not my conception, it was partial cure or relief of the symptoms We cannot always cure individuals, but we can often relieve them

Q—Well, then, you stop treating them, don't you? A—Why, no

Q—If they are relieved of the symptoms? A—Why, it depends upon whether—we do not if the symptoms recur If the symptoms recur they have to have further treatment

Q—Suppose they do not recur, suppose the symptoms do not recur? A—Well, if the disease—if the disease has abated so that it has become a condition which gives no active symptoms which demand treatment, then of course treatment should not be given until that disease gets in condition where the patient is suffering again, or where they need treatment

Q—Then, if a woman has symptoms in connection with some pelvic disturbance, and she is treated for the symptoms, and her pain is relieved, that woman considers that she is cured, and the doctor considers she is cured so far as those symptoms are concerned Isn't that a fact? A—That does not apply to her disease That applies merely to her symptoms

Q—That is what the doctor treats, isn't it? A—The doctor treats the disease, but he also treats the symptoms, because it is impossible to separate the two

Q—Didn't you testify on that occasion that the practice was to treat the symptoms? A—Why, very often we have to treat the symptoms, because the disease cannot be relieved For instance, in advanced cancer, where a woman is going to die of cancer, you can relieve the painful condition, but you may not be able to cure the disease

Q—I am talking about the menstrual disturbances or pain in connection with them or inflammation of the pelvic organs or the pelvic cavity which produces pain You do treat the symptoms in that class of cases, don't you? A—Why, the painful symptoms—

Q—I am talking about a case without a cancer A—The painful symptoms have to be treated, you have to relieve those and then you must cure the condition underlying it, if it is possible

The witness was then asked concerning his testimony regarding a number of remedies advised in the above-mentioned cases It was his recollection that there were tablets containing viburnum prunifolium with other drugs

The witness testified that he spends part of his time testifying in the court He probably testifies on an average of two or three times a week

Q—You were asked further "I will ask you if in your opinion, the treatment or the carrying on of a business through advertisements of this kind, and with this kind of treatment, is likely to be in any way dangerous to the party?" And your answer "I have thought that question over and I do not see how a thing which requires ten days use and then another application and the length of time—I do not see how any very acute illness could fall within the range of this treatment, because first, they must write for the remedy, and then get it back, and then take it The most acute cases would have been developed or terminated within the time The length of time necessary for the correspondence practically throws out that sort of ailment I do not see where the public life or public health, or the health of the patient would be greatly endangered, if at all, by this method There was a question brought up the other day that maybe a person would delay his treatment, and die of the disease by reason of the delay, notably cancer was quoted, that during the delay occasioned by this remedy a person might die of that disease or it might mature to such an extent that he had gone by the hopeful period I think the possibility of that happening with the type of cases which would answer this advertisement is almost infinitesimal I think that would happen so seldom that it is hardly to be considered" You made that statement, did you? A—Why, I think that is right

The witness then testified that in answering as to his opinion as to the use of the hypothetic medicine he based his opinion on his personal use of viburnum prunifolium and not on reading, but that he accepted everything stated in the hypothetic question concerning viburnum prunifolium as fact He knew of cnicus benedictus from instruction which he had received He formerly sold the drug in the form of a herb He sold it under the name of centaurea and chadron The people who used it were foreigners The witness testified that he does not know that all the pharmaceutical houses of the country make tinctures of carduus benedictus He has never experimented with the volatile oil

The witness was questioned specifically as to the content of carduus benedictus which is represented by cnicin and the relation of this portion to the entire extracted matter

Dr Adams mentioned the various conditions of the female uterus in which tannin might be used He defined a hepatic stimulant and stated in what way such a stimulant might be of service in the treatment of female diseases His remembrance of carduus benedictus is that it was used as a simple bitter, usually in the form of infusion

The witness does not know of any similarity between cnicin and quinin He defined a diuretic and a diaphoretic.

He stated that he used viburnum prunifolium for a number of years

Q—During that time you gave it to women with menstrual troubles? A—Yes, I used the drug quite a little

Q—And it contained 50 per cent. of alcohol? A—Not always I have used the fluidextract

Q—But that is only recently? A—And, Mr Hough, the fluid extract contains more than 50 per cent, if I remember right

Q—Fifty five per cent, is it not? A—It is 600 c c. of alcohol to 300 c c of water, I think is the menstruum

Q—You did not think, in giving it to women, that you were doing anything vicious, did you? A—Why, I tried the drug in that proportion, giving it in half teaspoonful doses, not in tablespoonful doses, and I did not decide that the effect of this drug was largely—in that form—was largely alcoholic, and not due to the drug value

Q—You say that there is, in your opinion, absolutely nothing in Wine of Cardui which would prevent a woman from taking it in constantly increasing doses? A—Nothing that I know of, no sir

Q—Did you ever drink it yourself? A—I have

Q—Did you increase the dose? A—No

Q—You say alcohol itself is not a food under any circumstances? A—My opinion is that it is not a food, because it poisons the individual before it can act as a food

Q—It does what? A—Because it poisons the individual before it acts as a food, and it is never a food except in a very limited sense indeed

Q—How does it poison the individual before it can act as a food? A—Well, it—that is, in small quantities it affects the will and lessens self control It has an effect upon the nervous system, especially in the young

Q—Does the percentage make any difference in your opinion? A—Naturally the larger the dose, the greater the amount of alcohol, the greater its effect

Q—Have you experimented any yourself in determining the physiological effect of alcohol in various proportions? A—In various proportions?

Q—Yes? A—No, I cannot say that I have

Q—Has your knowledge on that subject been gained by reading the literature? A—No, sir, it is based entirely upon what experience I have had with the use of alcohol and alcoholic substances

Q—How can you express any opinion on the subject if you have never experimented yourself? A—Well, the use of a remedy or the use of a drug in your practice, to my mind, is not the same as experimentation There you carry out a series of experiments to determine a point These are observations which I record from having used the drug

Q—Did the women that you gave the medicine containing alcohol to, acquire the alcoholic habit, any of them? A—I have never used alcohol or alcoholic drugs in sufficient quantity, or over a long period of time I have never given drugs indiscriminately to everyone, or other medicines I have always kept them under control

Q—Just answer my question? A—That is my answer

Q—Then you say they have acquired the alcohol habit? A—They have not

Q—Did any of the women you treated during the 30 years get well, or get relief from their symptoms? A—Yes, sure.

Q—What percentage got well? A—Of all kinds of cases?

Q—Of female troubles which had—which required no operation A—Oh, I think a large proportion of women recover under medical treatment

Q—I am asking you what proportion of yours got well? A—Well, of purely functional troubles, without displacements, tumors or anything of that sort, I believe that fully 50 per cent, perhaps more than that, would recover under proper treatment

Q—Then you mean you handed over the other 50 per cent to surgeons after trying to cure them or did you let them go? A—No I do not mean that a certain amount went to surgeons A certain amount of cases were relieved by mechanical supports, and a certain amount of cases would carry their defects through their lives, because it was not possible to operate, or it was—their mechanical supports would give them the needed relief

The witness was then cross-examined concerning the difference between relief and cure of various female diseases There was then read to the witness a statement from his testimony in Washington regarding what he meant when he used the words "bladder trouble" He replied that the remedies under discussion were to alleviate and were very seldom specific remedies The same thing was there stated regarding female troubles

Dr Adams stated that Mr Hough was reading symptoms from a card that were not in his statement Mr Hough replied that these were in the witness' statement and asked him if he wishes to change it He replied that it was immaterial

Further hearing of the case was adjourned until 2 o'clock the same day

May 2, 1916, Afternoon

Court met pursuant to recess Dr Nathaniel H Adams resumed the stand for further cross-examination by Mr Hough

CROSS-EXAMINATION BY MR. HOUGH (*continued*)

Dr Adams testified that a woman as a rule cannot diagnose her own case She can state when she has suppressed menstruation

Q—Now, what medicines do you usually give her for that? *A*—Why we must know If it is due to pregnancy, absolutely nothing If it is—

Q—Well suppose it is a young girl who is unmarried? *A*—Why my habit is to give her a good dose of quinin about two grains three times a day Give her a hot foot bath or mustard water, to give a hot drink of hot lemonade, and to put a hot water bottle at her back, the lower part of her back, and sometimes over her abdomen That is my custom and habit with young girls

Q—It is considered a safe thing to prescribe on account of the symptoms given by the patient, is it not? *A*—Such treatment with a young girl I should think would be safe

Q—Now, when a woman has painful menstruation, she tells a doctor that she has trouble at her menstrual period and she is able to diagnose that symptom and that condition isn't she? *A*—Not the condition. She is only able to diagnose the pain

Q—Well, I am not talking about the thing that caused it She knows that that is the symptom? *A*—Yes, she knows she is in pain, yes

Q—Now the first thing to do is to treat that symptom, isn t it? *A*—The symptom has to be treated And I will not say that that is the first thing to do, but it has to be treated, the pain has to be relieved until you find out what is the trouble what is causing the pain

Q—Well what medicines do you give in that class of cases when you reach the conclusion that it does not require a surgical operation? *A*—Well if it is due to a flexion of the womb to a bending of the womb why I give a sedative treatment, and I have the woman go to bed and use hot applications over the abdomen have her take hot drinks If there is a great deal of pain I give her sedative medicines

Q—Name some doctor *A*—Why, one that I am very apt to give is to give aspirin and sometimes a mixture of caffein and aspirin and acetanilid

Q—But you used to give viburnum compound? Haven't you? *A*—I have given viburnum compound yes

Q—And you used to give fluidextract of quassia? *A*—Of quassia?

Q—Yes *A*—I have never given quassia for that purpose alone

Q—And you have given fluidextract of pulsatilla haven t you? *A*—I have used pulsatilla in combination with other drugs yes sir

Q—And you have given fluidextract of gelsemium, haven t you? *A*—I have given gelsemium alone yes

Q—And you have given fluidextract of black haw?

The Court—Do you mean fluidextract?

The Witness—Fluidextract yes sir

The Court—Try and answer the questions doctor

The Witness—Yes sir I want to

Mr Hough *Q*—And also black haw? *A*—I have used all of those remedies

Q—For female diseases? *A*—I have tried them in female diseases yes sir

Q—Now you would give the same remedies for metrorrhagia and menorrhagia wouldn t you as far as the symptoms are concerned? *A*—Well I would if they had the same cause

Q—There is usually inflammation of the womb or the pelvic cavity in connection with all of those conditions is there not? *A*—No I don t think there is usually so I think it is often so There is often inflammation.

Q—Well in what per cent. of the cases? *A*—Why I think there is pelvic inflammation in dysmenorrhea in perhaps half the cases

Q—Now by the way pulsatilla is what you call a home remedy for those things, isn t it? *A*—No, sir pulsatilla is a powerful dangerous drug with a dose of two to ten drops

Q—Didn t you testify in Washington that it was a home remedy? *A*—Pulsatilla?

Q—Yes sir? *A*—No not alone no, sir it is not.

Q—Well we will see if we cannot find it for you Speaking of female diseases the Assistant Attorney General says Is there any other prescription Doctor you would use for that type, any internal remedies?

The Witness (Meaning yourself)—Yes sir They have a remedy similar to Hayden s Viburnum Compound Here is a tea This tea is used and is Remedy No 39 It contains cimicifuga gelsemium Jamaica dogwood fennel anise, caulophyllum viburnum prunifolium squaw vine aletris pulsatilla celery seed

The Assistant Attorney General *Q*—That is another home remedy?

The Witness *A*—No your Honor pulsatilla is a home remedy but this is a tea The herbs are cut up and set out in dry packages so much to a cup '

Mr Hough *Q*—You made that statement didn t you? *A*—But not in the sense that you asked me as though that was a simple remedy No it is a remedy that is used alone and I didn t mean that anybody puts pulsatilla in the hands of a family because it is a powerful dangerous drug

Q—What are the other home remedies which you referred to for female diseases? *A*—Well home remedies are the simple teas There is for instance the pennyroyal and things which can be used as hot drinks and which have no danger connected with them Such things are safe in the hands of families

Q—You did not consider that the alcohol in the medicines which you gave for those female troubles had any specific action as alcohol did you? *A*—Well, I would if I ever had given it in quantity to get the alcoholic effect, but when I used the alcohol in these remedies the alcohol carried its full drug content And the dose would be represented by half a teaspoonful or a teaspoonful

The Court—May we have a definition here of what is meant by a 'home remedy?

Mr Hough *Q*—What do you mean by a home remedy? *A*—Why I mean by a home remedy, a simple drug which can be put in the hands of a family for use in simple ailments without any danger of its doing harm if they make a mistake and take an overdose.

Q—What would be a home remedy for amenorrhea or suppressed menstruation? *A*—Quinin mustard foot baths hot drinks, or a little gin with an adult with a grown person, and hot lemonade, where the trouble is purely functional

Q—What would be a home remedy for dysmenorrhea?

The Court—Well let us get away from these indefinite terms What do you mean by a little gin?

The Witness—Yes I mean this, that gin is an alcoholic drug containing juniper and juniper in the quantity that is contained in gin and given in a hot drink, and given in one or two doses to a grown person and not continued, has a tendency to make an easy flow

The Court—Well how do you square that with your definition of a home remedy which as you have defined it includes some simple drug that cannot be harmful if you take an overdose? *A*—Well, gin of course could be harmful if it was taken in an overdose, there is no doubt about that. They can get drunk on it. And the reason of my mentioning gin is that it is a very commonly used preparation and I mentioned it because it has alcohol in it, and it has another drug and I think the knowledge of it is so general I think everybody knows it as well as a doctor, almost, that they don t take that in a poisonous dose, unless they want to get drunk.

Mr Hough *Q*—The effect of 48 drops of alcohol by itself is altogether different from the effect of 48 drops of alcohol in enough water to reduce the percentage to 20 per cent, isn't it? Or would you say the effect is just the same? *A*—Why, my opinion is that the effect is about the same

Q—Now do you think that you could take down in your mouth 48 drops of pure alcohol? *A*—Oh, do you mean the effect in my mouth?

Q—Well anywhere inside of you? *A*—Well, I misunderstood you Of course the local effect of 48 drops of alcohol is burning and you have to add enough water to it so as to permit you to swallow it

Q—Therefore you couldn't take 48 drops of pure alcohol in your mouth could you? *A*—I wouldn't want to

Q—Do you think anybody could? *A*—Yes, I think they could but I don t think it would be advisable

Q—Now when it is reduced to 50 per cent. it is easier to take that amount in your mouth, isn't it? *A*—Well, 50 per cent. is pretty strong That is the strength of whisky

Q—Yes and it is also the strength of the gin that you have just been talking about? *A*—The strength of gin yes sir

Q—Then when you reduce it to 40 per cent. its effect is less marked, isn t it? *A*—Well the local effect the local effect is less marked The general effect, in my opinion would be about the same.

Q—And the effect, when reduced to 20 per cent would be less still, wouldn t it? *A*—There would be very little local effect and you would have only the general effect to deal with

Q—Now how much alcohol can a person oxidize in the system freely? *A*—Freely?

Q—Yes? *A*—Well I think under the most favorable circumstances a 150 pound person in 24 hours can actually oxidize about an ounce and a half

Q—How many drops would that be? *A*—Four hundred eighty and 240—that would be 720 drops

Q—Of pure alcohol? *A*—Yes

Dr Adams was then asked concerning diagnosis as to the cause of a bearing-down feeling and pains during the menstrual period. He stated in what way he would arrive at a diagnosis

The witness stated that he makes a distinction between the classes of patients, as drugs and general treatment must be adapted to the circumstances of the patient He was asked to what extent he would say that a woman with female trouble could diagnose her own case

The witness was asked if he did not testify in Washington that it would be proper to treat on the diagnosis sent in by the patient. He replied that in certain cases when the patient had described the case completely and under certain conditions if one can arrive at a diagnosis and if he is sure of the case it would be proper to treat it. He was asked whether there would be danger in this way of overlooking consumption or cancer He replied that the likelihood of missing such conditions is greatly reduced by a physician s examination. He was asked concerning the use of medicines to make the breasts full. He stated that drugs are given when there is insufficient lactation after childbirth and that certain drugs may be taken for cosmetic purposes

Q—What do you mean by "cosmetic purposes?" *A*—Why, I mean that by rubbing in ointments, and perhaps there are one or two drugs, they have a tendency to make a full breast which women sometimes desire

Q—Well, you also take medicines by the mouth for those things, don't you? *A*—There are one or two drugs. There is a drug called Goat's rue or galega which has a reputation for doing that sort of thing

Q—And Heminal? *A*—What?

Q—Heminal? *A*—Heminal, that is an iron preparation

Q—It is a hemoglobin preparation, isn't it? *A*—Yes

Q—And it is used to develop the bust? *A*—Why, it is used to improve the quality of the blood If a woman was anemic, why, I presume it would have that effect

Q—Didn't you testify it was used to develop the busts *A*—Why, not to my knowledge It is a blood remedy If I testified to any thing like that it was in some other connection, of which you have not given me the distinction You have picked that out and not given me what goes before and of what follows

Mr Hough (Reading)—"I show you also two other prescriptions marked 2 B and 1 B? *A*—2 B is heminal, three grain tablets

'What is that prescribed for? '*A*—Heminal is practically a Parke Davis preparation Made for the blood It is a *hemoglobin preparation* and contains iron and is prescribed to enrich the blood One B contains extract of galega, one and one half grains, calcium lacto phosphate, two grains, and oil of fennel, one tenth grain This remedy is used to develop the bust and to cause an increase in the quantity of milk in a nursing woman"

The Witness *A*—That applies to that latter description Yes, sir, I think that is all right That is what I stated, and is what I still believe.

Mr Hough *Q*—Well, that is proper to give to a woman who is nursing, isn't it, to develop the bust? *A*—Galega—why, it has a reputed action in that way It is reputed to be able to increase the size of the bust

Mr Hough—Well, didn't you say—I will read further (Reading)

The Assistant Attorney General—Is it proper to give that to a woman who is not nursing?"

And the witness (meaning yourself) "*A*—Yes, your Honor, it is".

Mr Hough—You made that statement, didn't you? *A*—Well, I have just stated it is reputed to have a good effect

The witness was then asked concerning his testimony at Washington regarding the use of certain drugs for restoring sexual function on the basis of a filled out blank sent in by the patient defining his condition

Dr Adams defined his understanding of uterine tonics and uterine sedatives He had used liquor sedans in the past because it contains hydrastis, which he considers a valuable drug He knew the amount of alcohol in this preparation He gave it three times a day, but did not consider it wise to place it in the hands of a patient Ordinarily he used no treatment at the time of the menopause As a rule he used sedatives to allay nervous irritability It was brought out at Washington that the witness had answered that he considered the use of the mixture under the name of Mother's Cordial highly beneficial to a woman in the change of life period

The witness then discussed the composition of this preparation further with reference to its alcohol content and stated that to his knowledge it need not necessarily have alcohol

Q—Well, at any rate that medicine, in your opinion, would be highly beneficial to women in change of life period? *A*—Why, I think there are some valuable drugs in that prescription, yes, sir

The Court—You mean generally, in the absence of any symptoms whatever? *A*—Oh, no, no If they need it If there is a need of medicine If she did not need medicine, if there are no symptoms, it should not be given

The Court—I mean symptoms other than the normal symptoms of change of life? *A*—If she has just the normal change of life she should not have any medicine It is not indicated

Mr Hough *Q*—Well, the change of life in a perfectly normal woman, of course, is not—I mean it is purely physiological? *A*—Yes, sir

Q—And the same is true of menstruation, and the same is true of puberty, and the same is true of pregnancy, isn't it? *A*—True

The witness stated that it was his opinion that 75 per cent of the women go through the menopause without trouble About 75 per cent of all women are apt to have simple nervous manifestations which do not need any particular treatment It was brought out that at Washington the witness stated I think in fully 75 per cent of the cases this medicine 'Mother's Cordial' would be beneficial"

Q—Well, you made that statement, didn't you, that 75 per cent of the cases, in 75 per cent of the cases it would be beneficial? *A*—Well, that was asked in regard to that particular tea, and I don't see why that should not be used

Q—It is a medicine, isn't it? *A*—Yes

Q—And you would not give medicines when they were not needed at all, would you? *A*—Well, I don't believe in giving medicines where they are not needed But that is about the possible use of such a preparation

Mr Hough—And the Assistant Attorney General then said (Reading)

"In old women after change of life?" And you replied

'If they had any female trouble, yes, your Honor"

'*The Assistant Attorney General*—They may have female trouble which is not amenable to treatment of that kind?"

'*The Witness*—This happens to be treatment which practically is indicated in almost every case."

The Witness *A*—Well, it is all right It is harmless

Mr Hough (Continuing *reading*)—"Just think of that wide range of possibilities in that jurisdiction It is soothing and there is an eliminative treatment and a gentle cathartic There is a whole drug store in that"

The Witness—I think that is right

Mr Hough *Q*—And, Dr Kebler then said to you (Reading) "What good would it do in ovarian troubles?"

"*The Witness*—I think it would allay the pains Jamaica dogwood and those remedies—just turn to the uses of them That would be *an ideal symptom for* Jamaica dogwood It is soothing and quieting"

Mr Hough—Is that correct? *A*—I think that is right

Mr Hough—(Continuing reading)

"*Dr Kebler*—How would they help in tumor or in prolapse of the uterus or lots of other things?"

The Witness—No, just limit me to one at a time Take cancer Of course, by their method you would soon eliminate cancer, because that is a disease which would put that woman beyond reach of this condition, but here is the eliminant medicine and the medicine to gently relieve the bowels and the medicine which would soothe and quiet the part It might be argued that delay in this matter would put her beyond the pale of health, that delaying treatment by such a method as this would remove her chances I will say this about cancer, that any treatment of this sort over the time it extends, if it was unrecognized, it would certainly delay the case some, but I do not think practically we ever get hold of cancer of the womb until they are pretty far advanced *I think that is where we are all weak and* a large proportion of cancer of the womb cases that have come to us have gotten beyond the operation stage by the time we reach them But this treatment will never replace surgery in cancer of the womb"

Mr Hough *Q*—You made that statement, didn't you? *A*—I think that is true, that cancers come to us so far advanced—I mean speaking as a general physician—that cancers come to the office in a majority of cases so far advanced that they have to be simply relieved That the hope of cure is by That is the one thing we all are hoping for, to get at these cases early, and to recognize them so we can do some good

Q—Now, then, did you say also that "it would be useful, this medicine, if it was inoperable cancer It would be useful in any kind of cancer, but if it would in any occasion delay it would not be useful in that instance"?

The Witness *A*—Why, that is true If it would delay the recognition of cancer in any way it would be absolutely wrong

Q—But you also stated that you thought that would be true in a very small proportion of cases? *A*—Well, because I—I stated that if they had cancer, I thought they would go to the doctor, and the doctor would recognize it

Q—You stated that would be a very small proportion of cases, didn't you? *A*—Yes, because they would go to a doctor, it would be so serious they would go to a doctor and have it recognized

Q—You use medicine for apparently opposite conditions, don't you, the same medicine? *A*—Well, there are a few drugs that—

Q—Just answer that question? *A*—Yes, there are a few drugs that will act in apparently opposite conditions

The witness was then asked concerning empiricism in medicine and the distinction between "patent" and proprietary medicines He stated that for some time he has been connected with the manufacture of proprietary medicines which were for sale to anybody that would buy them The witness stated that it is a question of dispute whether all proprietary medicines are ethical or unethical

REDIRECT EXAMINATION BY MR T J SCOFIELD

On redirect examination Dr Adams stated that he would not give a medicine containing alcohol to a pregnant woman with Bright's disease because it would be dangerous He stated that digitalis is a medicine which may act in opposite conditions, meaning at the same time a heart sedative and a heart tonic A uterine sedative which will keep the womb quiet may give the blood vessels sufficient time to nourish the womb and remove the waste, and in that sense it may be considered a tonic

RECROSS-EXAMINATION BY MR HOUGH

The witness testified that even though all the alcohol given to a pregnant woman with Bright's disease were oxidized it still would have a bad effect because of its action on the nervous system and because it adds a poisonous drug to the system There is more work thrown on the kidneys because of the ash produced by the cells in oxidizing alcohol

TESTIMONY OF DR G M GODDARD

Dr G M Goddard was called as witness for the defendants

DIRECT EXAMINATION BY MR LOESCH

Dr Goddard testified that he resides in Waxahachie, Texas, where he has lived for nearly four years He has practiced medicine since 1890, first in Van Zandt County, Texas, later in Ovilla, then in Oak Cliff and then in Boyce Later he practiced in Taylor County in West Texas and then moved back to where he is now living He was graduated from the Kentucky School of Medicine, Louisville, Ky, in 1895 He has had several cases in which Wine of Cardui figured The first was Mrs W, whom he treated in 1892 She was suffering with uterine hemorrhage and painful menstruation as well as other pains accompanying these conditions He ascertained from her that she had been in ill health with dysmenorrhea and hemorrhage for three or four years, and that she had been taking Wine of Cardui almost incessantly Sometimes she would consume a bottle in a day Mrs W was about 35 years old

The witness then mentioned a Mrs D, whose condition was similar to that of Mrs W, only not so exaggerated He stated that she had been taking Wine of Cardui a little more than a year without any improvement He gave her practically the same treatment that was given to Mrs W, an antimalarial treatment, packing of the uterus with gauze She became well He diagnosed her condition as malaria with hemorrhage He had seen Mrs D pour one half or two thirds of a teacup of Wine of Cardui and drink it This case was also in 1892 When he was living at Walton Mrs D was about 30 years old

The next case was a widow, Mrs B, who had a similar condition He gave her iron, quinin and arsenic in pill form and she recovered She had been taking Wine of Cardui for about a year, and claimed that it did not do her any good

The next case was a step-daughter of a man named Mr L Dr Goddard attended her in confinement. At that time she had puerperal convulsions She said she had been taking Wine of Cardui since the third of fourth month of her pregnancy because of headaches and swelling of the feet.

The witness then mentioned the case of Mrs Du She had prolapsus and severe hemorrhage at each menstrual flow and at each time she would have to go to bed He advised operation, to which the patient would not consent. He used tampons, ichthyol and glycerin, but did not do much good The patient told him she had been taking Wine of Cardui for three or four years off and on She also stated that she had not obtained any relief from Wine of Cardui

Q—What was your next case, Doctor? *A*—The next case I had was a Mrs. J who had a case of gonorrhea She had been taking—she had had the gonorrhea about three months before they consulted me and had been taking Wine of Cardui during the time Now she didn t know that she had gonorrhea and doesn t know it to this day She was inoculated by her husband infected by her husband I was treating her husband at the time and cautioned him about his wife She contracted the gonorrhea from him and had had it for about three months before they came to me, and she stated that she had been taking the Wine of Cardui during this time, thinking that it was the change of life working on her and that was her condition. She had a real bad case of gonorrhea when I saw her

Q—Did you treat her so as to produce a cure? *A*—Yes sir Well I got her in much better condition Now we thought she was cured at least

Q—How old a woman was she? *A*—She was about 40—she was between forty and forty five years old Really I believe 42 or 43 years old

The next case was Mrs J B—a young woman with a gonorrheal infection She suffered with pain, burning sensation and discharge. In this case also Dr Goddard had been treating the husband. The patient had been taking Wine of Cardui for two or three months, but it did not do any good If taken over a long time he believed it seems to aggravate the condition

Dr Goddard stated that the patients told him that the longer they take it the more they take of it and the worse the conditions become

The next case was that of Miss Du—daughter of Mrs Du previously mentioned She suffered from delayed menstruation She had been taking Wine of Cardui more than a year without benefit She was about 19 years old She had malaria and was given antimalarial treatment and recovered

The next was the case of a Mexican girl, the daughter of a man named Mr P She was pale and anemic, had a cough and had never menstruated He diagnosed the case as tuberculosis and the patient died of this condition six months later She had been using Wine of Cardui for two years They told Dr Goddard it had done no good

Q—What was the next case, Doctor? *A*—Another Mexican girl She was seventeen years old That was just about the same case as this one The Mexicans were all in a bunch, they were a bunch of cotton pickers She came to me about two or three months later than the first one did, and with just about the same history, only she had been taking Wine of Cardui a year, she claimed. That is the history she gave me

Q—What was her condition? *A*—She had tuberculosis, and died in six or eight months or a year, something like that after I saw her

Another case was Miss M—a young lady about 18 years old She gave the history that she would menstruate about three or four times a year She had been taking Wine of Cardui about four years This patient died of tuberculosis and had no beneficial effect from the Wine of Cardui

The next case was Mrs W C S, who suffered with frequent miscarriages She had taken Wine of Cardui but it had not done her any good He advised her to quit taking Wine of Cardui About a year and a half later he waited on her in a full term confinement

A Mexican woman came to Dr Goddard with a baby 3 weeks old She had taken Wine of Cardui during pregnancy with a view to making her labor easy After the baby was born she had an abscess of the breast She was taking Wine of Cardui and had a high fever The abscess was opened, the pus withdrawn and the patient had no further trouble

Q—What is the next case you have, Doctor? *A*—Well I had a case of pellagra a negro A K.s wife that had pellagra for quite a long time a year or better, and she had an awful bad prolapse before she died The womb was protruding clear out. And she had been taking the Wine of Cardui during the time, this period of about a year before I saw her, with a view that she had some female trouble that was what she thought But she had pellagra and died of pellagra

Q—To what extent had she been using Wine of Cardui? *A*—She had been using it steady for—for about a year—the history they gave me

Q—Did she tell you what doses she took? *A*—She had been taking it in pretty big doses she used to take a third of a teacup full

Q—You saw her take it? *A*—I saw her drink it out of a bottle.

The wife of a negro named W H was suffering with an enlarged uterus and would have severe cramps at the time of menstruation Dr Goddard testified that he advised an operation, but the patient would not have it He saw her pour Wine of Cardui into a cup, add water and drink the mixture. She stated that she had been taking it for two or three years, but it did not do her any good.

The next case was Mrs W She gave a history of scant menstruation and wanted tonics She was married and was anxious to become pregnant She had been taking Wine of Cardui for more than a year The patient refused to be examined Dr Goddard was again called about three months later and he made an examination and found the mouth of the cervix tight He dilated and curetted the uterus About four or five months later the patient became pregnant and was later delivered of a full term child

Dr Goddard was then asked to describe instances in which Wine of Cardui was used as a beverage

Q—Well tell the instances where you know of it being used as a beverage *A*—Well I had a man by the name of Nelson that came to me up in Oklahoma Territory—it was a territory then He was a man who was addicted to the whisky habit and he could not get whisky at all times in his section of the country, and he used to use—he got to drinking Wine of Cardui, so he stated And when he came to me he was—came to me for treatment for the alcoholic habit—alcoholism

Q—How long had he been drinking Cardui? *A*—I believe he told me that he had been drinking it for better than a year—not all the time now, but when he could not get whisky

Q—And he used it—didn t he state to you that he used it for three or four years?

Mr Walker —Well—what's the use?

The Witness —I don't call that to mind He had been drinking for longer than that, but now—I don't—but he had been using the Wine of Cardui for a year—for about two years

He also recalled a case of a man named B R, who drank lots of whisky, when he could not get whisky he would drink anything he could get hold of

THE COURT —Now, is this what you know of your own knowledge, or as his general reputation?

The Witness —I know that he has drunk different "patent medicines," your Honor, and he has come to my house just as drunk as you ever saw a man, most, drinking Wine of Cardui He would have it in his buggy I have seen the bottles in his buggy I have taken him out of his buggy—taken the man out of his buggy and put him on a pallet on my porch, and kept him there half a day at a time I have done that, I will say, as many as half a dozen times, till he would get sobered up I have seen him drink a bottle of Wine of Cardui at one time, just take the cork out of the bottle and clean it up at one drink

Dr Goddard testified that he has also seen a man named W who would drink large quantities of Wine of Cardui He has seen him empty a bottle in three or four drinks

Dr Goddard then described the case of B, who was addicted to morphin and would also drink whisky when he could get it He would drink Wine of Cardui

He also described the case of S, who lived in a dry territory He would drink whisky when he could get it, but when he could not get it he would drink Wine of Cardui

The latter cases were treated in a sanitarium for drug addicts which Dr Goddard conducted

Q —Have you an instance of any woman using it as a beverage? *A* —Yes, sir Some of the women—patients that I would have

Q —Mention them? *A* —Why, I had one, an old lady—I don't remember her name Her daughter lived in Dallas and brought her over to the sanitarium, and I could not give you her—I don't know her daughter's name They lived—that is, the daughter lived in Dallas And in giving her history, she said that she had been back some years before that—that woman was then about 55 years old—that she was using Wine of Cardui She was taking morphin, and at the same time was using—she would drink Wine of Cardui She said that when she—back before her menstrual period—I mean, before her menopause—that she suffered so that she got to taking Wine of Cardui to tide her through her change of life, as she gave it to me, and it got to where she would not—she could not—she got no relief from it, and she would keep increasing the doses—and she got to using—mixing morphin with it She would take morphin in small quantities with her Wine of Cardui to get the ease—to get relief, and from that she went on and got in the habit of using morphin, and when she would run shy of morphin—that is, could not get enough of it, or she did not have as much as she wanted or needed, she could take the—increase the dose of Cardui, and could get along on less morphin And her daughter—she or the old lady, stated that she would take the Cardui, that it would make her dizzy when she would take big doses of it, it would make her dizzy, make her head swim She did not say she was getting drunk on it, or anything like that, but that is the statement that she and her daughter both made to me in my office

Q —Did you ever see her drink it? *A* —Yes, sir

Q —That is, drink Cardui? *A* —Yes, sir I saw her drink Wine of Cardui

Q —How much have you seen her drink at a single time? *A* —I have seen her drink a third of a bottle

Q —How long was she under your care, Doctor? *A* —She was there about a month with me. I usually kept them about a month

Dr Goddard also described a patient—wife of a traveling man—who was a morphin patient and had been using Wine of Cardui for painful menstrual disorders, and later began to take morphin This woman would drink as much as one-third of a bottle at a dose

Another woman named Mrs S would pour Wine of Cardui into a teacup, add water, and drink the mixture When drinking this mixture she could get along with less morphin

Another patient, a woman from Denison, Texas, stated that she commenced using Wine of Cardui to help her through painful menstruation and finally drifted to mixing morphin with it She would drink it out of the bottle, taking three or four tablespoonfuls, perhaps, at a dose

Another case was a woman from East Texas with the same history This patient would turn up a bottle and take two or three swallows from it

The witness stated that he has been in Chicago several weeks, perhaps three weeks or more, and that he had remained in Chicago since the adjournment at Mr Loesch's request

The court was adjourned until 10 30 o'clock Wednesday, May 3, 1916

May 3, 1916, Morning

The Court met pursuant to adjournment Dr G M Goddard resumed the stand

CROSS-EXAMINATION BY MR WALKER

Dr Goddard testified that he received a letter from Dr Taylor, secretary of the Texas State Medical Association He met Dr Heizer at a meeting of the Southern Medical Association in Dallas He testified that Dr Heizer asked him if he knew of any people who used or drank Wine of Cardui and requested him to look up the matter

Dr Goddard was cross-examined concerning the names of the persons mentioned in the direct examination The witness arrived in Chicago about March 21 and has been here about five weeks He is receiving his expenses and a per diem He was cross-examined concerning his various locations in practice and his connection with the sanatorium at Oak Cliff He was then cross-examined concerning the names of various people whom he treated at the sanatorium He testified that he had made no special endeavor, after he was asked by Dr Heizer to do so, to look up the persons mentioned in the direct testimony

Q —Will you tell the jury how it is that you remember their history, when you cannot remember their names? These people from the various points of the compass in Texas? *A* —These people would come in and, getting the history of them—why I just call to mind from memory we would make a record of the case The old lady in using the morphin, she was the first patient that I had gotten hold of that come to my institution—

Mr Loesch —A little louder

Mr Walker —Speak out loud, we don't hear you

A —The old lady that came was the first woman that come to my sanitarium that gave a history of having used—having been using Wine of Cardui and went to taking morphin That first attracted my attention to it in making out the history of these I don't just—it is just the particular condition of the case is all that I can call to mind that makes me remember it I remember these distinctly, the morphin patients, and having the stuff in their grip calls it to my mind Now, as to just any special thing that just calls to mind—without quite a number of patients that we had—we had quite a number but these were the only ones that used the Wine of Cardui in connection with morphin

Q —The list that you made up of those names, when did you make it up, in reference to your coming to Chicago? You say you made it up before you came? *A* —Well, I don't know that I could—that there was any certain day I had it I made out the list of names some of these—which do you mean, do you mean all of the names, or do you mean—

Q —Was there any of them that you recollect that you made out after you came to Chicago, and heard some of the testimony in this case? *A* —No, sir

Q —Then I take it that all the names that you have mentioned to this jury were listed by you before you came to Chicago, and after Sizer saw you, is that right? *A* —Yes, sir

Mr Loesch —Heizer

Mr Walker —What did I call him?

Mr Loesch —You just leave off the "Doctor" and say, Sizer, instead of Heizer

Mr Walker —Yes, Sizer examined the evidence on the drunks and the doctor got them

Mr Loesch —Sizer and Heizer, lawyer and doctor

The Witness —Sizer never examined them

Mr Loesch —Well, they are here

Mr Walker —Yes, and they are some specimens to be proud of

Dr Goddard was then again repeatedly cross-examined in an endeavor to recall to his memory the names of the patients treated in the sanitarium The witness then testified on cross-examination as to the various places in which he practiced from 1890 up to the present time

Q —Can you give me the name of any one person that you ever saw drink Wine of Cardui, or any woman that gave you in her history that drank Wine of Cardui, that is now living anywhere that you can tell us the location and name of? *A* —I can tell you where they were when I saw them last. I do not know where they are now

Q —But I am asking you about now? *A* —No, sir

Q —Is there any one whose name you can give us that is living who used Wine of Cardui as a beverage, or any woman who gave it as a part of her history, that you can tell us, that you know was living and where the person lived when you first met Heizer? *A* —No, sir, I don't know where they lived

Q —When was the last person, the date now, that you ever saw drink Wine of Cardui, as a beverage, or any you have named? The last date? *A* —That was when I was running the sanitarium *1900 and 1901*

Q —That is the last date of any man you ever saw drink it as a beverage? *A* —Yes, sir

Q —Give me the name Was that man or woman? *A* —Both

Q—At the sanitarium One of them was an alcoholic, and the other ones were morphin fiends when they came to see you? *A*—Yes, sir there was two of them, two of them

Q—Now— *A*—Wait a moment, what was that you asked me?

Q—I say one of them was an alcoholic, S from Oklahoma? *A*—B from Oklahoma B was a morphin fiend, and the rest of the men were alcoholics You have just got it reversed

Q—When was it that you saw N? *A*—N was in 1902

Q—Where was that? *A*—That was in my house He called on me to treat him for alcoholism and he stayed in my home

Q—At which place were you then living? *A*—I was living in Oak Cliff then and I was running the sanitarium

Q—Did he live in your house, while he was there? *A*—He had a room in my house yes sir, boarded with me.

Q—S— *A*—N his name was N

Q—Did any member of your family see N drink Wine of Cardui? *A*—I don't know about that I don't suppose they did

Q—Is there any other member of your family here? *A*—No, sir

Q—Any of these cases that you have named can you give me the name of any other individual on earth that saw them drink Wine of Cardui as a beverage, any one of them? *A*—All the people now that you are talking about?

Q—Any one of them I am speaking now of the people that drank it as a beverage Can you give me the name of any one that you have named of any person? *A*—Well, the help that I had in the sanitarium might have seen them I do not know whether they did or not I could not say for that

Q—As far as you know, nobody else but yourself ever saw these people drink Wine of Cardui? *A*—No I do not know that they did, not around me, not only the ones that was in the sanitarium

The witness was then again cross-examined concerning the names of the patients whom he treated who took Wine of Cardui

TESTIMONY OF DR C HUGH M'KENNA

Dr McKenna was called as a witness for the defendants

DIRECT EXAMINATION BY MR T J SCOFIELD

Dr McKenna testified that he has resided in Chicago for sixteen years He devotes more attention to surgery than to general medicine He graduated from the Rush Medical College in 1903 He then spent a year as intern and assistant to the late Dr Nicholas Senn later for about four years was assistant to the late Ferdinand Henrotin He was abroad in 1909 and again in 1910 In 1909 until about 1913, he was associated with Dr John B Murphy in the capacity of associate chief of St Joseph's Hospital In 1913, Dr McKenna was appointed surgeon in chief, and president of the staff of St Joseph's Hospital

In the treatment of diseases he uses both mechanical and medical means if indicated Dr McKenna testified that he has had no experience with cnicus or carduus benedictus

Q—Now doctor will you tell the jury what experience you have had in the use of viburnum prunifolium and what conclusions you have reached as a result of your experience with it, as to its therapeutic value? *A*—Early in my practice I used viburnum prunifolium and I used it particularly in the extract in the dry form I should say that I used it over a period of probably five years and owing to the fact that I had no results from it at all I discontinued its use

Q—Now when you say you used it in the dry form what do you mean by that, doctor? *A*—Well I mean that if I remember correctly I had Burroughs & Wellcome an English firm put up viburnum prunifolium in the form of tablets used in connection with small doses of the tinctura opii camphorata also in a powdered form making it more easy to be used by the patient

After using it for a time I figured that the only effect I got from it was the paregoric and then trying the drug alone I got no effects and discontinued its use

Q—Then in your use of viburnum prunifolium you did not use it in the form of a fluid at all? *A*—Well I might say that I probably have written ten or a dozen prescriptions of the fluidextract of viburnum prunifolium

Q—But with the exception of those prescriptions your experience in the use of the drug was in the dry form? *A*—Yes sir

There was then asked the witness a hypothetical question similar to that asked of previous witnesses and he stated that he had an opinion as to the physiologic action and therapeutic value of the hypothetical medicine

Dr McKenna testified that such a medicine would not be proper scientific treatment for the various uterine displacements

Q—Why not doctor? *A*—It would have absolutely no effect upon the organ They are out of place. That is to say retroversion retroflexion anteversion and anteflexion, and if they are caused by certain inflammatory conditions pressing down upon them such as pyosalpinx or any other pathological conditions within the pelvis it would be absurd to feel that any medicine would have any effect upon these conditions

There was then described to Dr McKenna an experiment similar to that described by Dr J Clarence Webster and he stated that such an experiment would confirm the opinion which he had expressed Such an experiment would cause him to believe that the hypothetical medicine was not a uterine tonic Dr McKenna testified that puberty, pregnancy, the lying-in period and the menopause are normal physiologic conditions and that in a large majority of cases they require no medication whatever The menopause is a very dangerous time to give any medicines that might mask the symptoms of some pathologic condition which might occur

Q—I say but going back to the age of puberty, you say that it is an impressionable period in the history of a girl and that it is the one period particularly when no alcohol should be administered Now why is that Doctor? *A*—Well, it is at a time when the young girl is going through a change that psychologically, or so far as the question of her mental makeup is concerned she should not receive anything that is of a stimulating character, because of this change through which she is passing at that period

Q—What would be the effect if anything of the alcohol contained in such a medicine at such a time, used as frequently as is advised here three to four times a day, three times a day, upon the question of the excitability of the girl's passions? *A*—I did not catch the last part

Q—Upon the question of the excitability of her sexual passions? *A*—I said that at that time young girls are of a very impressionable age They are very apt to acquire a habit and particularly at a time when a new period has come into their lives from the standpoint of the change in the sexual organs and it is very likely of course to stimulate them markedly in that respect.

Dr McKenna testified that menorrhagia and metrorrhagia are symptoms of disease In explaining he described

Q—Now when you say they are symptoms of disease what do you mean by that doctor? *A*—I mean that there is a varying number of abnormal conditions occurring in the female organs which may cause a woman to flow that may cause an increased flow at the normal period the monthly period, or it may cause a flow between the periods The conditions that bring about this flow are varied They come on sometimes very insidiously without a woman noting any condition herself at all I might refer to a patient that I have had in my experience within the last few weeks A woman 42 years of age.

Q—Have you got anything here to illustrate that case? *A*—Yes I have

Q—Will you please produce it bring it up here

The Witness—May I stand up?

The Court—Certainly?

Mr T J Scofield—Doctor stand on this side (the witness produced three glass jars each containing certain specimens hereinafter referred to and described, and the said jars and their contents were within view of the jury)

The Witness—This woman that I refer to is 42 years of age approximately She came into my office at 104 South Michigan Avenue about two and a half weeks ago Practically the only history that she gave was the history of flooding as she expressed it. She had no pain no pain referable to her pelvic organs

She said that she had been flowing for a matter of over two weeks and was flowing so heavily on that day that she did not wish me to examine her as she expressed it and I told her that under those circumstances that it would be well for her to go somewhere where she could be put to rest immediately

I recommended that she go to the hospital which she consented to do I examined her at the hospital However she did not go to the hospital directly that night but rather came there the next morning and under the proper aseptic conditions I examined that patient and found a small submucous fibroid which is a small growth presenting in the canal of the womb presenting somewhat in that manner (the witness illustrates by encircling the end of his little finger with the first finger of the left hand so that the tip of the little finger protrudes about one quarter of an inch) through the opening of the canal leading down from the womb

Upon further bimanual examination I found that she was suffering with a good sized fibroid, as represented in this jar (Referring to one of the jars hereinbefore produced) Now the only symptom that that patient complained of was the question of flooding She had no pain no other symptom at all and I felt that it was a very important case particularly from the standpoint of showing that there is absolutely no way in which a woman can tell whether that is an operative case or not

I present here also a second case that was operated on pathological number 5070 was operated on April 15 of this year the fibroid of the uterus and the small submucous fibroid of the cervical canal I present also a second specimen—

Q—Doctor is this the fibroid here taken away from the woman? (Referring to contents of one of the jars) *A*—That is the fibroid. She was operated on October 15 (The witness apparently intended to say April 15)

Q—What is her condition now Doctor? *A*—She was discharged today feeling perfectly all right

Q—Go ahead? *A*—I present also a second specimen This represents what is known as a double dermoid cyst of the two ovaries and was operated by me on March 14 of this year

Mr Walker—That is the middle one? (Referring to the position of the jars.)

The Witness —That is these two This is the right ovarian tumor, and this is the left ovarian tumor (Indicating contents of jar No 2)

Mr T J Scofield Q —The same patient? A —The same patient Now, this woman I saw on the morning of March 14 and the only symptom she had, referable to her pelvis, was slight metrorrhagia, or flowing between the periods She had some cramps in the abdomen, but so far as the pelvis was concerned, her symptoms were a slight metrorrhagia

Now that patient was examined, and it was decided that it was one of two conditions either a strangulated or twisted pedicle of a hemorrhagic ovarian cyst, or an ectopic pregnancy

She was immediately sent to the operating room and operated and we found blood flowing freely into the abdomen from a twisted ovarian pedicle, the upper half of the tumor being made up of what is known as dermoid and containing hair, and in this instance some bone and various other tissues, which comes about in conditions (if we bring it down to a question of the development of the fetus) where certain layers come together while the fetus is still in utero or within the womb and there is malformation at that time

Now this, on the right side, was a mixed dermoid and hemorrhagic cyst and on the left side, was a large tumor taking up the entire ovary The entire ovary—in fact, there was not any true ovarian tissue at all As I stated before, this case was ruptured and was bleeding into the abdomen, and if it had not been recognized within a period of a day or such a matter, she could very easily have bled to death

Now the patient was immediately operated and made a good recovery and left the hospital I think in a period, I think, of about three weeks or three and a half I do not know the exact date The number of the second set of specimens is 5020 I gave the first one, 5070, I guess, did I not?

The Reporter —Yes, I think so

The Witness —The second one is pathological number 5020 The history and names of these patients are here for anybody who wants them

Mr T J Scofield Q —Now, doctor, let me ask you whether or not these cases that you have just been describing are illustrative of many other cases which you have had in your practice? A —Many, and I—

Q —Now, I suppose—go ahead A —and I particularly wish to point out to this jury the fact that it is impossible not only for any patient suffering with the condition as described in the second set of specimens there, namely, the hemorrhagic cyst of the ovary, to determine what that condition is, but it is practically impossible for a medical man after he has given the patient the most searching examination, to say whether that is an ectopic pregnancy, by that I mean a conception without the womb, or a hemorrhagic cyst, so that the question of stating that certain conditions are not treated because they are operative conditions—here is a condition in point, that nobody but the doctor and under the most searching examination can tell what the condition is

Q —Now, doctor, as I understand it, you, as a surgeon, and as a doctor, could not diagnose the condition from the symptoms which the patient disclosed to you? A —In no way

Q —And as to at least one of these cases, you, as a physician and a surgeon, could not with certainty diagnose the exact condition there after examination, until after you had opened the abdomen? A —In the case of the second case, that is the hemorrhagic cyst of the ovary, no

Q —You were able to determine— A —I expected that it was an operative case, and that it should be operated immediatly

Q —Now, how could you tell that it was an operative case, from what the patient told you? A —No, from my examination, which consisted in the bimanual examination, placing one hand in the uterus of the patient, or in the vagina of the patient, and the other hand over the abdomen, and examining in what we call a bimanual way, and in addition to that, making the necessary laboratory examinations, such as the blood count, that go with that type of examination

Q —Then, if I understand you aright, doctor, in the treatment of those two cases, you did by your examination discover abnormal conditions that the symptoms as manifested, or told you by the patient, did not disclose? A —Exactly

Q —So far as the complaints—

Mr Hough —I do not see that this is material

The Court —Which?

Mr Hough —His question, and the answer

The Court —I do not think it is myself, but nothing was said about it, until it got by us

Mr Hough —I did not catch it

Dr McKenna testified that the hypothetical medicine would not be a proper scientific treatment in cases of menorrhagia and metrorrhagia

There was then read to him a statement from the Ladies Birthday Almanac concerning flooding He stated that it was absolutely incorrect and misleading to state that

> "Flooding is always a sign of danger The best treatment is complete rest in bed, and Wine of Cardui three times a day"

Dr McKenna then described other conditions such as sarcoma, or cancer, which might bring on similar symptoms as those of the cases previously mentioned These symptoms might also be produced by inflammation of the fallopian tubes He stated that a medicine similar to Wine of Cardui would do no good in cases of menorrhagia or flooding

There was then read to Dr McKenna a statement from the Ladies' Birthday Almanac and he was shown a picture from the pamphlet illustrating a woman with her hand at the small of her back He was asked to state to the jury the conditions which might arise within a woman which might be the underlying cause for such a pain in the back as the picture and the paragraph described He stated that there were many conditions He mentioned particularly tuberculosis of the spine and metastatic infection of the intervertebral spaces He treated cases of this kind by removal of the focus of infection An early recognition of the condition is necessary He mentioned also the mechanical treatment by immobilization, also the use of vaccines He mentioned the use of the steel corset in the treatment of metastatic infection of joints He also described in general the treatment of tuberculosis of the spine

Mr Hough —Just one moment Do I understand the witness to say that when a man or a woman has a pain in the back, that this is his condition?

The Witness —No, sir, I did not say any such thing

Mr Hough —Then this is immaterial

The Court —I thought it was immaterial This is one of the things that may cause pain in this particular point in the back, shown in the picture

Mr Hough —Anything can cause a pain in the back I thought he said if any one had a pain in the back, they had to have this thing

Mr T J Scofield —He did not say that, and from what you inferred it, I do not know But he said that a pain in the back might be due to, or result from such a condition Then I asked him what different conditions might produce such a thing and now he is answering

Q —Now, Doctor, let me ask you whether or not such a condition as you have been describing would produce the sort of symptoms of pain that has been described and read to you, from this Ladies' Birthday Almanac? A —It would

Q —Would that case be a case that a woman could diagnose and determine herself the condition that you have described? A —She could not

Q —Would that case be a case for medical, mechanical or surgical treatment, in its origin, and throughout the history of the case? A —It would

Q —That is, you would use medicinal and mechanical means and possibly surgical means? A —I would

Q —In what stages of that disease would you use medicine? A —If, as I stated—

Mr Hough —That is objected to as incompetent, irrelevant and immaterial

The Court —It seems to me that the only important thing is to show that the doctor believes there are some disorders of women, that will show a symptom of pain in the back, and then give his opinion whether or not this hypothetical medicine, assuming that it is Wine of Cardui, will have any effect on it

To which ruling of the Court the defendants, etc., excepted

Mr Hough —I do not think that it is contended that Wine of Cardui will cure every pain or disease that a person might have

Mr T J Scofield —As far as that is concerned, I am objecting to any statement by Mr Hough as to what they claim or don't claim Here is their advertisement

The Court —Counsel has a perfect right to disclaim always

Mr T J Scofield —Yes, at the proper time, and under proper circumstances

Mr Hough —The point is that the inquiry should be based upon the literature which says that this medicine might be the medicine which would do the good It don't say that it would be absolutely

Mr T J Scofield —This is based absolutely on your literature

Mr Hough —It says it might be, don't it? You ought to base your question on that

Mr T J Scofield —Well, let us read it and see what it says there?

Mr Hough —Go ahead

> *Mr T J Scofield* —(Reading) "That is where the pain is, in the small of your back It is terrible, nerve racking and unbearable You just cannot work. Don't let it keep up Stop it Take a dose of Cardui, the Woman's Tonic Lay down for a short rest In a few minutes you will feel much better" You will feel much better, not might feel better
>
> 'Take Cardui regularly for a few days It will make all the difference in the world Keep it up till the pain is gone and you have got back your strength Won't you thank Cardui"

Q—Now then Doctor, having heard —

Mr Hough —Will you finish the rest of that?

Mr T J Scofield —I will with pleasure, if you care to have it read

Mr Hough —Why, yes

> *Mr T J Scofield* I read it to the jury (Reading) "Yes you will' Will what? Think Cardui as thousands of others have done and are doing every day Try this plan of treatment it may be just what you need"

Mr Hough —It says "It may be just what you need"

Mr T J Scofield —Sure

Q—Doctor would you consider the hypothetical solution which I have mentioned to you proper treatment for such a condition as that which you have described? *A*—I would not

Q—Would you consider, assuming that the hypothetical medicine and Wine of Cardui are practically the same, that Wine of Cardui would be a proper scientific treatment for that condition *A*—It would not.

Q—Would you think Doctor, that the hypothetical solution or Wine of Cardui (assuming that they are practically the same) might be just what was needed for such a condition as you have described?

Mr Hough —One moment Do you mean the pain in the back?

Mr T J Scofield —The condition that you have described?

Mr Hough —I object until that is made more specific

Mr T J Scofield —The condition which produced the pain in the back, under the conditions which you have described

THE COURT —The objection will have to be sustained to that

To which ruling of the Court the defendants etc excepted

Mr Hough —We don't claim it will cure curvature of the spine

THE COURT —Ask the doctor as to whether this hypothetical medicine would be indicated for any kind of a pain in the back.

Mr T J Scofield *Q*—Have you an opinion doctor as to whether or not this hypothetical solution, and Wine of Cardui (assuming that they are practically the same) are indicated for any sort of a pain in the back such as has been described here? *A*—I have an opinion

Q—What is that opinion? *A*—That it would do no good

Whereupon the further hearing of the case was adjourned until 2 o'clock p m the same day, May 3, 1916

May 3, 1916, Afternoon

The court met pursuant to adjournment

TESTIMONY OF DR C HUGH M'KENNA (*continued*)

Dr C Hugh McKenna resumed the stand for the defendants He testified that he supplied to the attorneys for the plaintiffs the names of persons on whom he operated

CROSS-EXAMINATION BY MR HOUGH

Dr McKenna testified that the first case on which he operated came to him direct and had not been under the care of any other physician The second case was a ward case and had been under the care of Dr A A Small, who had been treating her for rheumatism Dr Small discovered the dermoid cyst and called in Dr McKenna to see the patient The patient had not complained of any symptoms other than flowing of blood from the uterus and of pain in the abdomen Dr McKenna was shown the picture of a woman with her hand on her back and was asked whether the location of the hand pointed toward pain due to menstrual disturbances or whether to the conditions which he described

Q—Well if a woman came to you and said she had a pain in her back and she put her hand down there would you first think of menstrual disturbance or would you first think of this tuberculosis of the spine or metastatic infection of the spine? *A*—I would think of all the conditions that I know that might cause a pathological condition of the spine

Q—You mean you would think of all of them at the same time? *A*—Yes just in a general way yes. I think that we are concerned with that situation in every case we see and we must necessarily take them all into account otherwise we are apt to run off at a tangent.

Q—Now is metastatic infection of the spine a very common trouble or is it very rare? *A*—It is common enough and I think I can describe that best by saying that I have heard in some of the leading clinics the expression used that those cases come in in crops

Q—Come in in what? *A*—Come in in crops

Q—In crops? *A*—Yes

Q—Is that because they are suggested by the Doctor to the patient or— *A*—It simply means that they come in large numbers. They come at definite periods of the year following certain infections that I described this morning—that inflammatory condition of that kind of the spinal vertebra may be caused by infection to the nose and throat and the fallopian tubes or the Bartholin glands, or the gall bladder infection, or appendix infection—any of those and, certain changes in the weather, and atmosphere is apt to stimulate.

Q—Well, what is the best crop season, Doctor, for that? *A*—I beg your pardon?

Q—What is the best crop season for that? *A*—As I said this morning—the question first is to determine—

Q—Well you said certain seasons of the year What is the best season for that crop? *A*—Well, I misunderstood your term when you said the best season I would say the worst season They come in as a rule shortly after the time that the crops are harvested and they come particularly from the farming communities, and it is supposed that the kind of work that is done on the farm all the lifting and bending and perspiring freely, and probably catching cold, has to do with the question of forming what we please to term as the locus minoris resistentiae meaning the point of least resistance, and consequently the infection, being present in some of those places is deposited in this point of least resistance which in these instances happen to be the joints along the vertebra

Q—Have you ever practiced in the country Doctor? *A*—No, I never have

Q—Are country doctors as a rule, prepared or equipped to handle cases like that? *A*—Country doctors—and I say this through my society connections — have done a great deal ever since I have been in medicine toward the question of perfecting themselves, so that they can take care of those cases in a scientific way There is not anything that I have described that they cannot carry out and are carrying out as far as I know, in most of the country places.

Dr McKenna was then cross-examined concerning the condition of the case in which the blood was flowing into the peritoneal cavity He stated that if the patient bled for a day or two she would probably be dead from hemorrhages He was asked to name other conditions producing pain in the back which were worse than those already named He mentioned carcinoma and sarcoma of the spine and crushed spine

PAIN IN THE BACK

Q—Well do you mean to say then that when a woman has a pain in the back she might have almost anything the matter with her? *A*—Well we must take the position as examining physicians that she might have any of these conditions and I would say that it is very essential that we take into account all of these things in order that we may not—although it might only occur once in a thousand times—miss that case which, if taken in the beginning, might be saved and a deformed spine saved

Q—Would you say that would be about the proportion in which those cases would occur once in a thousand times? *A*—No I would not say that I said even in the case that it only occurred in that proportion These cases occur much more frequently

Q—Well how much more would you say? Twice in a thousand times? *A*—I said that I believed—that I put it in a way that we could get a conception of it by saying that they come in in crops after the—particularly from the farming communities—after the harvest is over and I think that gives you a very good idea of the frequency particularly of the metastatic type of spine That is a condition of course that had gone unrecognized formerly and treated as lumbago and different forms of rheumatism and so on, until scientific medicines have put it on a very definite basis and—

Q—How late is that that it has put it on a definite basis? *A*—Well—

Q—Recently? *A*—Within the last ten or twelve years

Q—Now taking the cases coming in crops as you say what would the proportion be through a year? *A*—Well what way do you mean?

Q—Would the average—where a woman had a pain in the back—would there be one case in a thousand— *A*—Oh yes very much—

Q—Where it would be this metastatic infection of the spine? *A*—Yes it would be very much more frequent

Q—Two cases in a thousand? *A*—Much more frequent than that I should say

Q—Well give me an idea a hundred cases in a thousand? *A*—I—it is rather difficult because of lack of specific statistics at this time to say definitely what proportion of cases or what the percentage of spinal pathological—or what percentage these make of the pathological conditions of the spine but I would say that of the injuries or pathological conditions of the spine, that they are relatively frequent

Q—Well what do you mean by relatively frequent as many as ten in a thousand? *A*—Well I would say much more frequent than that—

Q—As many as— *A*—I do not know that I can give you the percentages

Q—You would say—

THE COURT —Mr Hough, I think the witness has made it pretty plain that he has no general statistics to go by He does not know the number of women in the world that have backache, and he cannot know the number of people that have these particular disorders of the spine

Mr Hough —How can he say it is general then?

THE COURT —He has told you in general terms Now, there is no use trying to get down to specific terms, because the witness says he cannot give them

Mr Hough *Q*—Do you say you are unable to give the percentage of cases? *A*—I said very definitely I could not give the percentages and I doubt very much whether there are any compiled statistics on that line of surgery, at this time

Q—As a matter of fact, is it not very rare with this condition, when a woman has a pain in the back, in comparison with all the other conditions? *A*—No, I should say it was not

Dr McKenna then stated that dermoid cysts are uncommon, relatively speaking Hemorrhagic cysts of the ovary are not uncommon Development of such growths might go on for a long time without the woman knowing anything about it Dr McKenna stated that physicians sometimes might operate thinking that a fibroid tumor was present when actually the patient was pregnant

Q—Do you know what is referred to as the Podsnapion plan of ignoring the function of menstruation? *A*—The which?

Q—The Podsnapion plan? *A*—No, I do not

Q—You say menstruation at puberty is always physiological? *A*—No, I do not say so

Q—In what percentage of cases would you say it is pathological? *A*—Oh, I would say probably in the neighborhood of fifteen to twenty per cent—something like that, in my experience

Q—Would you say that—or would you not say that amenorrhea, as a disorder of puberty, is very common? *A*—No, I would not I have so stated

Q—Is that stated upon your own practice and experience, or upon reading? *A*—That is based upon my own experience and my associations with other men in clinics, in a general way on my knowledge of such conditions

Q—Would you say it was based in any degree upon the experience of others who have written medical works? *A*—No, it is not based upon the—I said it was based upon my own experience and upon my association—as I learned it from other men in clinics

Q—Have you ever talked with Dr J Clarence Webster on that subject? Have you ever learned anything from him about it? *A*—I have talked to Dr Webster many times I do not know that I have talked to him specifically on those conditions

Q—*Doesn't he say it is very common?* *A*—*I don't know what he says*

Mr T J Scofield—I object to that question, if the Court please

The Court—Objection sustained

To which ruling of the Court the plaintiffs, etc, excepted

The witness stated that he had referred as a student to a book of Dr Webster on diseases on women but he does not know what the book states on this subject The witness was asked if he had ever read "Case Histories of the Diseases of Women," by C M Green of Harvard He does not know this book The witness has heard of hot gin being used for girls having amenorrhea or delayed menstruation at puberty He does not consider it a common remedy He would consider the alcohol in it as having a deleterious effect He does not consider alcohol as a food He is not familiar with the experiment of Atwood and Chittenden on this subject nor with Cushny's experiment

He has not read any editorial statement in the Journal of the American Medical Association as to the amount of alcohol which may be taken into the system in food without a deleterious effect but such a statement would not affect his opinion in any way The witness defined his belief as to what the pharmacopeia and National Formulary represent He believes that every patient should be treated as a patient and does not follow these books in prescribing

The witness does not remember that he has used fluidextract of cimicifuga nor that of cinchona

Q—Did you ever use the fluidextract of ergot? *A*—Yes, I think—yes, I know I have

Q—Well, you know that there is fifty seven drops of alcohol per dose in that, don't you? *A*—Yes I would say in that connection, that as far as the alcohol is concerned, that it has a deleterious effect, but, in order to get the effect of the ergot, over a certain period of time, we permit the deleterious effect of the alcohol to go on, in order that we may get the effect of the ergot, because it is given in conditions of flowing, as a rule, and in severe conditions where we must take that chance with it, but I should say that if the fluid extract of ergot was given, and the patient could go out and buy it and take it just as they wanted to, that I would condemn it just as much as I would any patent nostrum

Q—You mean that if the physician prescribes it, it is not deleterious, but if taken without the physician's— *A*—I do not say that at all I said that it was—that it has a certain deleterious effect, as far as the alcohol is concerned, even though the physician prescribed it, but I said, in order to get the effect of the ergot in that solution, we forego the deleterious effect, for a short period of time, because it is given under a physician's orders and directions, and is not given and left to the discretion of the patient

Q—Did you ever give tincture of cimicifuga? *A*—No, I don't think I have

Q—Did you ever give spirits of juniper? *A*—No, I do not think I have I may say, in that connection, that we are concerned more in finding out the cause of the disease, and we find that after we have gotten at the bottom or cause of the disease, and then the cause of medication is rather a simple condition

Q—When you say "we," what do you mean? *A*—I mean that in connection with my associates in hospital work, in a regulated hospital

Q—Are you speaking of the profession as a whole, or just of your associates? *A*—I mean that as these things are carried out in the larger clinical centers—the cross way roads physician can, too take those things up in a certain way—and that the best example of that situation is the manner in which the clinic has been built up here in Rochester, a little city of only 6,000

Q—Do you mean in Minnesota? *A*—Minnesota, yes

Q—Are you connected with Mayo brothers? *A*—No, I am not

Q—Do you refer—you refer to the Mayo brothers? *A*—I do

Q—Have you used the compound tincture of gentian? *A*—No, I do not believe I have ever used it

Q—Did you ever use tincture of hydrastis? *A*—I have used the fluidextract of hydrastis

Q—How many drops of alcohol were there in each dose of that? *A*—Well, that was immaterial, I do not know how much it was immaterial, because it was always given in a limited number of doses usually given in combination with the fluidextract of ergot.

Q—In combination with that? *A*—Yes, sir

Q—In combination with anything else? *A*—No, I don't think I have

Q—Each dose contains 45 drops of alcohol, does it not? *A*—It may be I said I am not a pharmacist, and I don't—

Q—You don't pay attention then to the— *A*—and I want to get the reaction of the drug—and, as I stated before, I am willing to forego the deleterious effect of the alcohol to get that, over a limited period, because I am watching that patient, and if there are any symptoms that lead me to believe that this is causing certain pathological conditions to occur—the deleterious effect, in different parts of the body—I immediately stop it

Q—You are talking about in your hospital work? *A*—Well, I would do that anywhere

Q—Before you got into hospital work Then you mean when you want to use a certain drug, you absolutely ignore the amount of alcohol that may be used with it? *A*—Well, I state that if I want to use a given drug I use it in such small quantities, as far as the amount of alcohol is concerned, that it will not produce any very bad effects

Q—But you say you do not know how much alcohol there is in it? *A*—Well, I know this, that if the amount would be used for a short time, that it will not cause any very bad effect

Q—Well, you know that in some you use as much as 115 drops to a dose don't you? *A*—No, I don't.

Q—What is the largest amount that you know that is in any medicine that you use? *A*—Well, if you will ask me the drugs that I have used, I will tell you the amounts I have used

Q—Well, you have used spirits of ether? *A*—In what way?

Q—Any way? *A*—I have used ether as an anesthesia

Q—Only in that way? *A*—That is all

Q—Compound spirits of ether? *A*—No

Q—Taraxacum? *A*—No

Q—Compound spirits of juniper? *A*—No, I have not used that

Q—Cannabis indica? *A*—I probably used cannabis indica

Q—Well, the main point is that you absolutely ignore the amount of alcohol, and you don't even know what there is in a dose, if you prescribe a certain remedy? *A*—I mean to say that the amounts that I give it in, and the length of time that I give it, that it would not have any deleterious effect, or, if it does have a deleterious effect, if it is noted, I would immediately discontinue its use

Q—You have used Warburg's tincture, have you? *A*—No, I do not think I have.

Q—Do you know what it is? *A*—I do not know it by that name

Q—Did you ever use bitter tincture? *A*—No, I don't believe so

Mr T J Scofield—Of what, Mr Hough?

Mr Hough—That is the name in the National Formulary, just bitter tincture

Q—Compound cathartic elixir? *A*—No, I don't think so

Q—Doctor, if you regard alcohol as deleterious in all cases, why don't you use a glycerin preparation of hydrastis or of ergot? *A*—Well, I may use them in some cases

Q—Have you ever used it? *A*—I may have

Q—Well, don't you know whether you have or have not? *A*—No, I don't recall—

Q—Don't you know that you never have used it? *A*—I don't recall I could not say definitely That would be a very difficult thing, Mr Hough, to say

Q—Why would it be difficult for you to recollect whether you used the one with alcohol, or one with glycerin? *A*—I think that would be a very difficult thing to state, when a man has been in active practice, and seeing a lot of cases in a large hospital over a period of twelve or thirteen years, just exactly what medicines he has used, that would be a difficult thing I said that I did not regard the amount of alcohol that I gave in a fluidextract of hydrastis or a fluidextract of ergot, over the period of time, even though it may be deleterious to a certain—to a slight degree—I said that I would forego the deleterious effect for the action of the drugs that were in the alcoholic solution

The witness defined the reason for his belief that the giving of alcohol in appreciable amounts for a long period is de terious, and he stated that to give alcohol to a girl at the time of puberty without any control would be vicious If it were controlled by a physician, the patient would not have an opportunity to form a habit The witness stated that from two to three years are required for the changes which the girl undergoes in passing from girlhood to womanhood—puberty He distinguished between what is normal and what is pathologic at that period

He stated that even in a normal condition there might be some pain during the establishment of menstruation He has even had cases in which, during the entire life of the woman, there was slight pain during the period and this was not considered pathologic and no medicine was indicated for it He stated that if there are chlorosis or anemia, medicine can be given

Dr McKenna stated that he had used viburnum prunifolium for about five years but that he got no effect from it either in tablet form or as fluidextract He does not consider it likely that something was left out in the tablet form which was in the liquid tincture or fluidextract He does not know if other physicians have reported effects obtained with this drug, but even so it would not change his opinion

The witness has treated cases of uterine displacements which were not operative cases He has used mechanical means but did not use any drugs by mouth with the idea that they would act on the condition If there was enlargement of the uterus, he might give ergot to contract it down Ergot is a uterine tonic If it was indicated he would prescribe an antiseptic douche He has used pessaries and he considers the following statement read from the Cardui Home Treatment as a truthful one

> No one should ever apply a pessary without the advice and under the constant supervision of a physician

Mr Hough *Q*—Well can't they be applied by a midwife or a nurse? *A*—I would say—my experience has been that if the pessary is_going to give the proper support it means that the uterus must be in the proper position, and the physician is the proper one to determine that

Q—Can you answer the question just as I asked it doctor whether it could not be just as well applied by a nurse or a midwife? *A*—I should say it could not

Q—Could not?

The Court—Or anybody else if they knew how?

Mr Hough *Q*—Or anybody else if they knew how other than a physician? *A*—I would say that nobody would know how as well as a physician

The Court—Well that is not the question If anybody knew how couldn t anybody do it? *A*—Yes anybody could if they knew how

Mr Hough *Q*—Then that sentence is misleading isn t it?

The Court—Well if it is you may so argue to the jury Mr Hough

Mr Hough—Can t I argue it to anybody else?

The Court—Not with the witness certainly

There are cases of pain in the back which may be treated by medicine and which are not operative The experience of the witness has been that the majority of cases should be treated by mechanical supports and by medicines The majority of cases which he sees are hospital cases which are classified in his service because they require a combination of mechanical and medicinal treatment

The witness does not remember that he has used wine of ipecac The only preparation of ipecac that he has ever used, was many years ago in connection with a cough mixture

Q—Now in cases of flooding that are not operative cases—first let me ask do you have any cases as a rule that are not operative cases or are the majority of your cases only operative cases now? *A*—I have a great many cases that come to me for examination and as I stated before that one of the real functions of my work is the question of going over those cases and getting at the cause of the trouble and I stated before that after the cause was ascertained that many of those cases were treated very simply even in a medical way and that as we have gone on in this scientific way the number of cases to be operated—

Q—Now will you explain what you mean by we right there? Do you mean the entire body of physicians, or you yourself? *A*—No, I mean myself and my associates in the hospital That the number of cases operated are less today than they were five and ten years ago because of the fact that we have better methods of determining the cause of disease

Q—You mean you don t act so quickly in the matter of performing operations as they used to? *A*—Yes that is right. In other words we determine the cause and we can definitely establish whether it is necessary to operate or not or whether the patient will get well without

Q—Well now, when a patient comes to you today, you not being in the general practice, and you decide that it is not an operative case, do you keep the case and treat it medicinally, or send it to another doctor? *A*—Well, that is determined entirely by the history and the examination, and all Those patients are ordinarily sent out to the hospital, and they are worked up there probably in combination with other men

Q—Then you keep them there after the examination, whether they need an operation or not? *A*—Oh, that all depends upon what the condition is It may be that in an office examination, after a history and all that you can determine definitely what that case is, and I may go on and treat the case myself

Q—You mean medicinally? *A*—Yes

The witness stated that he has cases of menorrhagia which were not surgical cases In the treatment he first determines what is a case of tuberculosis or case after pregnancy He believes that a large majority of the inflammatory conditions in the pelvis that cause menorrhagia are operative He has had cases of metrorrhagia which were not operative cases These were treated by mechanical methods but he does, if there is reason for it, prescribe medicines by mouth He may have prescribed viburnum prunifolium for that condition before he found out that it was inert and worthless

Q—Did your patients get well, any of them at the time you were giving them viburnum prunifolium? *A*—Oh, they may have and they might have gotten well if I didn't give them anything, but—

Q—Well did they get well while you were giving it to them? *A*—I found that in the majority of the cases that it didn't do them any good

Q—Did they get well when you were giving it to them? *A*—Well, I can t answer that question by saying that they all got well or that they didn t all get well I am stating that the majority of them were not affected by the—

Q—I am not asking you whether they were affected I am asking you whether the majority got well or whether the majority did not get well? *A*—The majority did not get any better by that form of treatment

Q—That is not the question Did the majority of them get better after you gave them that treatment? *A*—I stated that the majority did not

Q—Did not get better? *A*—Were not affected by the—

Q—I am not asking you whether that treatment did it I am asking you whether as a matter of fact they got better? *A*—I stated that they did not the majority

Q—They did not get better? *A*—That is why I discontinued it

Q—After using it for five years? *A*—I stated in a general way, as nearly as I can remember, that I used it during that period I never used it very extensively

Q—And during five years you continued using it without getting any good results from it or getting results which you considered were due to it? *A*—Yes in a general way I used it over that peroid during that time Of course I was developing the work in the hospital and was subjecting most of those patients to a more careful scientific scrutiny and was finding that if you determine the cause definitely, and all that it was possible to treat those patients very much better in that way than it was to try and give them any medicine

Q—Have you ever had any cases of dysmenorrhea which you treated by medicine given in the mouth which were not operative cases? Or cases which you thought required an operation? *A*—Oh I would say—I do not recall that I have treated many such cases I probably have seen and treated some cases that had a painful menstruation that was brought on by the question of a certain amount of congestion and any type of a hot drink would seem to do some good but I have felt that most—

Q—What medicines did you ever give? *A*—I beg your pardon?

Q—What medicines did you ever give? *A*—Oh, I have probably had them take a little hot brandy

Q—Hot brandy? *A*—Yes

Q—Anything else? *A*—No I don t recall Probably hot tea.

Q—Anything else? *A*—I don t recall of anything else

Q—And you probably gave viburnum for some of those cases too didn t you? *A*—I may have. I probably did, but it didn t do any good

Q—You are sure of that are you? *A*—Yes I am sure

Q—Did the brandy do any good? *A*—Well they probably thought it did

Q—Did you think it did? *A*—I didn t know But the fact that—do you mean to say the brandy?

Q—Yes. *A*—Why yes. I wouldn t mind if a patient were suffering with a dysmenorrhea that I knew was not organic in character I wouldn t mind giving that patient some hot brandy

Q—Did you ever treat any woman with medicine in the mouth during the menopause? *A*—Oh I suppose I have It all depends on the condition for which I was supposed to treat her

Q—Did you ever give her any brandy at that time? *A*—I don t know that I have.

Q—Did you ever give her any gin at that time? *A*—No I have not I have never recommended gin

Q—You have tried viburnum *prunifolium*? *A*—Well you are asking me just in a general way a lot of things that I have done and it is very difficult for me to answer that question unless you give me some specific reason for giving a thing Now if I have given medicine at the menopause—why I may have treated cases of conditions in the abdominal region anywhere, and given those patients medicine during the menopause Certainly I have

The witness was then asked as to the treatment of dysmenorrhea with drugs and also at the menopause He stated that he treated dysmenorrhea at the menopause just as he would at any other time If there was *only* discomfort, he would not give any medicine, if there was real pain, he would give something to relieve the pain He stated that it is his opinion that the hypothetical medicine would do just what it was assumed to do in the hypothetical question He was then cross examined as to the quantities of drugs in the hypothetical medicine

Dr McKenna reiterated that it was his opinion that in the quantities present the drugs in the hypothetical medicine would not produce their therapeutic effects which it was assumed they would have

The witness was repeatedly cross-examined as to his statement concerning his opinion as to points in the hypothetical question He stated finally that he does not know of any combination of the two drugs in the hypothetical medicine that would *accomplish anything*

The further hearing of the case was adjourned until 10 30 o'clock the following day, May 4, 1916

May 4, 1916, 10 30 o'clock *a m*

Court met pursuant to adjournment

TESTIMONY OF DR FRANK BILLINGS

Dr Frank Billings was called as a witness on behalf of the defendants

DIRECT EXAMINATION BY MR T J SCOFIELD

Q—What is your given name? *A*—Frank Billings

Q—You are professionally a physician, are you? *A*—I am

Q—I take it you are a graduate of some medical college or colleges? *A*—I am

Q—Of what, doctor? *A*—Why, I am Professor of Medicine in the University of Chicago and in the Rush Medical College and Dean of the Faculty of Rush Medical College

Q—Now, Doctor, may I ask you to talk loud, louder than you are talking, it is difficult to hear back here, and, if you will, speak a little louder, please *A*—I did not hear you I have not heard you quite

Q—I say, speak a little louder

The Court —You better be fair with the witness, Mr Scofield

Mr T J Scofield *Q*—What college are you a graduate of, Doctor? *A*—Northwestern University Medical School

Q—What year? *A*—1881

Q—Since your graduation, have you pursued your studies of medicine? *A*—I have

Q—Where? *A*—In Chicago

Q—Have you studied abroad, also? *A*—In the years 1885 and 1886, I spent those years chiefly in Vienna, Paris and London

Q—Have you had any *hospital* experience, Doctor? *A*—I have

Q—With what institutions? *A*—I was House Physician, Resident, at Cook County Hospital for eighteen *months in 1881 and 1882* I was Attending Physician at the County Hospital for about ten years, about 1890 to 1900 I was Attending Physician at the Mercy Hospital from 1888 until 1898 I was Attending Physician at St Luke's Hospital about ten years, I have forgotten the exact dates, and Consulting Physician of St Luke's Hospital until last year, from the time I retired as Attendant I have been an Attending Physician, and still am, of the Presbyterian Hospital, since 1898

Q—I did not understand what your connections are as stated by you, *with the* Medical Colleges at the present time Please state them again *A*—I am Professor of Medicine at the University of Chicago, also Professor of Medicine at Rush Medical College, which is a part of the University of Chicago, affiliated with it, and Dean of the Faculty of Rush Medical College

Q—Now, in your work, Doctor, do you give any special attention to any particular department of medical practice? *A*—I devote my time chiefly to what we call internal medicine That means, general diseases, as a whole, with diagnosis In other words, I exclude as a rule, from any treatment, the so called specialties and surgery I diagnose, devote my attention partly to diagnosis in the whole *field*

Q—Where you speak of diagnosis, will you tell us what you mean by diagnosis? *A*—By diagnosis, one means the recognition of the morbid conditions in the human individual, which cause the symptoms of disease

Q—Now, Doctor, in making a diagnosis of a condition, what is it that you do? *A*—We usually first obtain the account of the patient, or, if the patient is not able to give it, of someone who is acquainted with the conditions from which the patient has suffered In other words, the history, the past history of the patient, which includes always the symptoms as the patient has observed them himself

Next a physical examination is made of the patient, and that physical examination is supplemented—if necessary—by laboratory examinations of the blood, of the urine, if necessary of the stools, or if the individual happens to have suffered from something in which there is a fluid in the joint or in the chest, that is sometimes withdrawn and examined in the laboratory That is what we call a general examination

Q—Doctor, are you familiar—you use medicines, of course, in the treatment of disease? *A*—I do

WHAT IS A TONIC?

Q—Now, *are you familiar* with the action of drugs and of tonics? *A*—I am familiar with such drugs as I use

Q—What is meant by the word "tonic," Doctor? *A*—In medicine, the word "tonic" has practically two designations as we use the word In one sense the word "tonic" is used with the adjective "stimulating" a stimulating tonic, meaning that by the use of the tonic one would stimulate the functions, some of the functions of the organs of the body

For instance, a tonic for a muscle, would be one which would make the contraction of that muscle more firm than it would be *without the* tonic To stimulate the secretion would mean that one would stimulate, for instance, the juices of the stomach and make *more of them*, more of the juices to help indigestion or, in the case of excretions from the kidneys to improve or increase the excretions, *practically* secretions of the kidney

Or, for instance, to increase the nerve *tone Some remedies will act* upon the centers of the brain and spinal cord and improve the impulses, nervous impulses that go out Those *things we designate as stimulating* tonics

Then we have *another kind of tonic* which we call restorative A restorative tonic is one which adds to, as for instance—the best example would be with an *individual suffering* from a poverty of the blood, which we technically call anemia, and we give iron, an actual ingredient of the blood, and try to improve the quality of that blood Iron is a good example, *therefore,* of a so called restorative tonic

AMENORRHEA

Q—Doctor, we have heard *something in this* case about amenorrhea Will you tell the jury briefly what the term amenorrhea" means and what is the most common cause of it *A*—Amenorrhea — the actual derivation of the word means 'without menstruation," the absence of menstruation

When the menses fail to appear at the proper time or when they miss during the menstrual period of a woman, we call it 'amenorrhea," and the causes are various Certain constitutional diseases, with or without poverty of the blood, usually with poverty of blood, anemia, will cause it

For instance, tuberculosis of the lungs, or a general tuberculosis, is associated with anemia, and *one of the most common and early symptoms* of that is amenorrhea

People who suffer from diseases in which there is what we call secondary anemia — by that term I mean an anemia that is dependent upon some disease which is destroying the blood all the time, or is preventing the formation of new blood all of the time Those are called secondary anemias

As an example, malaria is associated with anemia because the parasite which causes malaria is in the blood stream, actually gains entrance to the blood corpuscle and destroys it Therefore anemia occurs

In the hookworm disease, of which we occasionally have an example in Chicago, imported from tropical or semitropical regions of the South, the worm sucks the blood from the intestine and commonly a bleeding occurs around the head of the worm, so that anemia is very common

Pellagra, a disease due to a faulty balance of diet, not enough animal food, as a rule, is associated with anemia, secondarily, want of nutrition

Bright's disease, one form of it especially, is associated with anemia, because the poisons in the blood due to the Bright's disease cause anemia

Then young girls in their formative period, as they are developing, will sometimes suffer from a want of general development of the womb, of the heart, or blood vessels, of the blood making organs, and they suffer from an anemia peculiar to them, and they do not menstruate

Those are the general causes, due to a want of blood, poverty of blood, or anemia, and amenorrhea occurs

Amenorrhea also occurs toward the woman's change of life, at periods sometimes extending over two or three years Sometimes the menopause will occur immediately, and sometimes it will take one year or two years, and I have seen it occur over three or more years in time in which the woman would miss for six *months at a time*

That is merely apparently the readjustment of the organs of her body to meet these new changed conditions, but that *description may* not meet it in some other woman, because occasionally she *menstruates* with the amenorrhea between That does not mean that that is associated with poverty of the blood It is *more directly* related to the nervous mechanism of the body, to the physiology of the body, and its physiological processes Does that answer in full, sir?

Q—I think it does, Doctor, sufficiently Doctor, are you acquainted with the drug known as cnicus benedictus? *A*—I am *not* acquainted with it from my own personal knowledge of the drug

EXPERIENCE WITH VIBURNUM PRUNIFOLIUM

Q—Well, are you acquainted with the drug known as viburnum prunifolium? *A*—I am

Q—Will you state your experience, if you have had any experience with the drug, and your conclusion as to its *therapeutic* value, if any? *A*—Viburnum prunifolium is the bark of black haw *It is drug* which has been known for a great many years It was — it has been recommended for many years by teachers of materia medica, the materials of medicine, and at one time recommended by specialists who made a study of woman's diseases, so that at one time it was *rather commonly* used, either in the form of what we call the solid extract of it, or the fluidextract of it

When used it at first was supposed to help stop hemorrhages from the womb It was supposed to help stop pain during menstruation It was supposed to tone up a good deal But, like other drugs that we had in our earlier days, proved out more therapeutically it has not to day the same standing that it had twenty five or thirty years ago or twenty or even fifteen years ago perhaps

Formerly it was prescribed a good deal by general practitioners and by specialists for these conditions that I have named, painful menstruation dysmenorrhea, or hemorrhage of the womb but it has gradually dropped out

I have used it myself either in the form of the solid extract—sometimes in the form of the fluidextract It is a nasty drug about one of the nastiest things that anyone can put in their mouth that is to taste almost nauseating in its effect, so that instead of using the fluid extract I have been in the habit of ordering the empty capsules in which the patient could put the 20 or 25 drops necessary to take three or four times a day as the case may be

Like all things it apparently sometimes had an effect in relieving pain in connection with what one was doing beside for painful menstruation It sometimes—the woman sometimes would apparently cease to flow to some degree while one was using it coincident with the use of other things but practically—I think I can speak for myself—

Mr Hough —I have difficulty in hearing you If you can talk a little louder, I would be obliged

The Witness —My own opinion is that it is a drug that has mighty small potency for the things for which we formerly used it

Mr T J Scofield *Q* —Doctor, do you still continue to use it? *A* —I used it this last year on one patient that is in 1915

Q —Now under what circumstances did you use it there Doctor? *A* —And I have occasionally prescribed it but very rarely, perhaps once or twice a year in recent years

Q —Formerly you prescribed it more often did you? *A* —In earlier years I did

The witness was then asked a hypothetic question as to his opinion of a hypothetic medicine similar to Wine of Cardui

Q —Now doctor what is that opinion? *A* —I would say it would have practically no effect upon a dysmenorrhea due to an anemia

Mr Hough —On which? *A* —Amenorrhea due to anemia

Mr T J Scofield *Q* —Why not doctor? *A* —Because it would have no restorative effect upon the blood

Mr Hough —Did you say restorative effect? *A* —Yes

Mr T J Scofield *Q* —Now doctor is there any single form of medicine or of medicinal treatment, a single form of it that would be applicable for an anemia which is due to such a very large variety of causes? *A* —No there is no single remedy that could be applied to all of the different types of anemia which I have named a moment ago

The Court —You have used the word anemia in your question and I am sure that you mean 'amenorrhea I think the reporter ought to correct it

Mr T J Scofield —Yes

Mr Hough —Which way did the witness understand it?

The Court —I do not think there is any doubt but what the witness understood it, Mr Hough

Mr T J Scofield —Now doctor in amenorrhea—

Mr Hough —One moment

The Witness —If I would substitute the word amenorrhea ' for the word anemia it would be the same answer

Mr Hough —The answer would be the same in either case? *A* —Yes

Mr T J Scofield *Q* —Now Doctor is amenorrhea which is due as you have described very frequently to anemia properly treated by any one form of tonic? *A* —No

Q —Why not? *A* —Because of its various causes and the treatments must be based upon the underlying causes

TREATMENT OF ANEMIA

Q —Now in treating anemia let me inquire whether or not iron and arsenic and strychnin would constitute good treatment. *A* —Iron is one of the chief drugs which we use because the blood contains iron in its corpuscles Arsenic is used because it stimulates the bone marrow and other blood making organs to make more cells. Strychnin is not a restorative tonic It may be placed in these restorative tonics to stimulate nerve sensations or something of that kind but of itself it is not a direct restorative tonic It is a stimulating tonic.

Q —Now Doctor suppose that you had an amenorrhea that was a result of anemia or due to anemia and that the cause of that anemia is malaria as you have stated in your previous answers What would be the proper treatment there? Would iron be proper treatment? *A* —Not at the beginning One must get rid of the malaria first One must give the patient the remedies which will destroy the malarial parasites which are in the blood and in the spleen and in the bone marrow and elsewhere in the body before one can expect a restoration of the blood by means of so called tonics iron and so forth

Q —Well suppose now Doctor that you have an amenorrhea from an anemic condition and the anemia is due to hookworm as the underlying cause What would be the treatment which you would have to give under those circumstances or what would it be necessary to do? *A* —There it is absolutely necessary that one must get rid of the hookworms which are in the intestinal canal before any more blood is made that is before blood will accumulate in any quantity and the amenorrhea due to the poverty of the blood in that case would remain until one got rid of the hookworms, and built up the blood

Q —Now then, doctor suppose that you had an anemia that was due to syphilis would that require a special form of treatment or not? *A* —It would

Q —What would it require? *A* —Antisyphilitic remedies must be used until the patient is at least partly restored to health, to overcome the anemia which is not infrequently present in syphilis

Q —Now doctor, is the same thing true of all constitutional diseases that result in anemia? *A* —It is We sometimes are not able to overcome the constitutional disease and therefore we cannot then get rid of the amenorrhea Tuberculosis of the lungs as you know is very frequently a fatal disease and if the patient continues—if the disease continues to progress, the amenorrhea persists till death and all the remedies in the world won't start it.

Q —Now under such circumstances as that, doctor, that you have last referred to would it be good practice in your judgment to undertake to stimulate the menses by any means? *A* —Well it would do no good and it would be simply a question of the judgment of the doctor who did it—that would be all It would be a question rather of the judgment of the man who had the management of the patient. Inasmuch as it would be ineffectual, it would be pretty bad judgment in my opinion

Q —Now, doctor, would you consider viburnum prunifolium and carduus benedictus in an alcoholic menstrum such for instance, as in the hypothetical medicinal solution which I have described to you as a tonic in any sense? *A* —It may be a moderately stimulating tonic because of the amount of alcohol in it that is stimulating with its bitter principles—possibly it might be an appetizer I suppose that it is dependent somewhat, upon the palate of the individual who takes it But I would not consider it a restorative tonic in restoring anything to the body, blood or power or anything of the kind

Q —Are you familiar with the condition known as inflammation as it affects the generative organs of a woman? *A* —With several forms of inflammation yes sir

Q —Well now doctor when inflammation passes up through the uterus and involves the lining membrane of the fallopian tubes what name do you apply to that condition? *A* —The general term salpingitis, meaning an inflammation, of the fallopian tubes

Q —With reference to the escape of the product of inflammation or the discharge which results from it, do those products of inflammation ever become locked up in the fallopian tubes or in any of the other closed cavities of the body? *A* —They do

INFECTION OF FALLOPIAN TUBES

Q —Now have you had any special experience or given any special study to the subject of locked up septic matter in the various closed cavities of the body such for instance as the fallopian tubes? *A* —I have

Q —Well tell us about it doctor *A* —Such locked up material due to infection — by infection I mean due to pus bacteria to minute organisms—when locked up form what we call a focus of infection That is it is circumscribed it is held in, it cannot get out it is locked in

The fallopian tube is a tubular affair with an opening at either end one in the uterus, and one outside toward the general peritoneal cavity Those two openings may be closed and within that tube is this septic secretion going on and it may be small in amount or it may be large in amount. I have seen them swollen up to that size (apparently indicating a diameter of about three inches) as big around as a pear a large sized pear

In that condition when such secretion cannot get out the germs that are in them are apt to pass into the general circulation into the blood vessels and they may lodge anywhere in the body They may lodge in the joints and produce a type of infection of the joints They may lodge in the heart, and produce a type of malignant heart disease They may lodge in the blood vessels of the kidney and produce a type of infection of the kidney and so on all over the body But more particularly in the fallopian tube and there are two kinds of infection that are the worst to do that.

One is the germ that causes gonorrhea We call it the gonococcus That locked up in such a place as the fallopian tubes may escape into the blood stream and produce malignant heart disease as any practitioner—I have seen and I think one could say that any practitioner of wide experience has seen a fatal disease result as a rule

It may go to the joints and produce what is commonly known as gonorrheal rheumatism That is a wrong term to use It is gonorrheal joint disease it is not related to rheumatism at all It is a gonorrheal infection of the joints sometimes attended with pus in the joints a serious disease and painful prolonged for long periods of months and sometimes years crippling in its effects

Then in addition to that locked up in here it may suddenly leak out of the outer end of this tube and produce peritonitis a gonococcal peritonitis That is not an uncommon condition at all among children in public institutions.

In our public institutions even in our own state as high as 40 to 50 per cent. of the young girls that are in our public institutions have acquired gonorrhea and many of them suffer from this infection of these tubes and peritonitis and joint troubles and all of that

The other infection which is important of the fallopian tubes is tuberculosis Tuberculosis which either comes from the uterus or from the blood stream and lodges in the fallopian tube which becomes the center of a generalized tuberculosis It may go to the peritoneum this lining of this great cavity and infect it and we have what we call tubercular peritonitis or it may spread to the lungs or anywhere else in the whole body it may spread anywhere.

Now besides those two main things that I have named, any other kind of a germ that is pathogenic for man that is that will produce disease and particularly the kind of germs that cause pus There are several of those varieties. One of them grows in a chain and the word streptos means 'chain so we call them streptococcus becaus it is a little round ball Those produce pus and they are common, and where they get into the uterus or where they get into the fallopian tubes they produce pus there, and while that is common, it is not as common as gonorrheal infection of women

Gonorrheal infection of women is one of the commonest things that we have to meet It is almost a shame to mankind, the number of women that suffer from gonorrheal infection of those tubes I think that covers it, sir

AN ILLUSTRATIVE CASE

Q—Now, doctor, have you any special case in mind that you came in contact with recently, in your hospital work or otherwise, that illustrates the matters which you have just been describing? *A*—One meets this type of infection in women very commonly in the hospital practice in which this gonococcus infection, unknown to the woman many times, sometimes an innocent wife suffers from infection of the womb, infection of the fallopian tubes and infection of the ovaries—and with that infection the womb, getting bigger, will often take a malposition, usually backward, carrying with it the tubes and the ovaries, carrying them down with it, and they become inflamed and matted together

We have that very commonly, producing generalized symptoms, which are probably not necessary to name to you, simply naming that general thing

Recently, that is, within the last few months, I had a patient, a young woman in the Presbyterian Hospital, who had had this infection of the fallopian tubes and of the ovaries, secondary to a general infection coming from her head

The infection was in her tonsils, which had been removed at her home in Texas It was in her teeth in her jaws It was in one of these sinuses up here these little hollow places in our heads and, as a consequence she had a joint infection

The general infection had become so severe in her joints that some of the joints were ossified Some of her finger joints were ossified, so that she could not bend her fingers The knees and ankles were involved in it, so that she was unable to walk She was bedridden

In the examination of that woman, it was also found that she had this pelvic condition, the matting together of these tubes and ovaries and that she suffered also from menorrhagia, and excessive flow The excessive flow was of such a degree that she was anemic, that is, had poverty of blood The cell count went down to about three million, where it should have been four and a half or five millions, in a certain amount of blood The color of her blood—the hemoglobin, as we call it, was reduced from an average normal of 85 in the woman, to 35 with her, and she was weak and bedridden and almost helpless, almost a helpless invalid because of those general conditions

Necessarily her treatment had to be long to get rid of the joint infection which was the cause undoubtedly, the result—that in her pelvic organs and about her head

Finally, however, because the hemorrhage continued, and did not respond to any form of drug treatment to stop that hemorrhage, or to build up her blood, it forced an operation, and, in the treatment of that woman, she was the one that I gave the viburnum prunifolium to, without any result upon the hemorrhage

She had painful menstruation, it had no result there Even ergot, given under the skin, or into the muscles so as to get its intense effect, in addition to its use by mouth—a drug that is potent to cause contraction of the womb would not stop it

Finally I asked Dr Webster, Dr Clarence Webster, who is the surgeon for diseases of women in the hospital, to look the patient over with me, and advise what we could do for that womb, to stop the hemorrhage In his opinion, after the use of these drugs, such as I had given her, operation alone would relieve her

In the operation these conditions were found, and the cause of the hemorrhage was proved to be a hardening of the blood vessels that go to the womb, and in the womb itself, and so much were the walls hardened, that they could not contract to stop the hemorrhage Consequently there was an anatomical condition there, a condition of the womb and ovaries, under which that hemorrhage would have gone on until the girl would have bled to death, in all probability, and the only relief came from tying off those blood vessels, and removing one diseased ovary and both fallopian tubes because of the conditions in them

Following that, that girl steadily progressed toward health That operation was done a year ago tomorrow, the 5th of May In September she left the hospital, or sometime in August, and came back to have her blood examination, and in September her red cells had mounted up to nearly five million, four million one hundred thousand, or something like that, hemoglobin 85 per cent She had gone from 115 pounds in weight to 125, and while she had still this irreparable joint trouble in her hands, and some in her feet, she was restored to her friends as cured as anybody can be

Q—Now, doctor, having this hypothetical solution in mind, and assuming that it is taken three or four times a day, in tablespoonful doses for such a condition of pyosalpinx, or other forms of inflammation, or locked up infection, such as you have been describing, where the products of inflammation are enclosed in the cavities of the body, have you an opinion as to whether the use of this medicine will (quoting from the Cardui Home Treatment Book, page 13) "restore the patient to health"? *A*—I have

Q—What is that opinion? *A*—I think it would have no effect in the restoration to health

CURE

Q—What is your opinion as to the difference between the cure of a disease and the relieving of symptoms of disease? *A*—I think in the first place, that the word 'cure" is a bad one People are restored to health, or the near health The word "restoration" is a good deal better than to say "cured"

We assume a good deal if we say that we are the active agents in absolute curing We help toward restoration To palliate means to relieve the symptoms Palliation means simply to relieve one of suffering It does not mean at all that you have even restored the patient to health

THE PERIOD OF PUBERTY

Q—Do you recognize the condition known as the period of puberty in girls as a natural physiological development in their lives? *A*—It is

Q—Do you think a medicine, such as I have described to you in the hypothetical question, should be recommended for all girls during the whole period of puberty? *A*—I do not.

Q—Why not, doctor? *A*—Because puberty is a physiological and normal development in a woman, in a girl It is when she passes from girlhood into womanhood When it does not occur normally, there is some constitutional thing back of it that prevents that I named one to you a moment ago

Certain girls are defective in physical development The womb remains infantile, that is, like that of an infant The blood vessels, the heart and other organs do not develop the way they should, and yet that girl has the external appearance of being pretty nearly normal One would get at it, if you made a physical examination—that these things were at fault

But that girl will fail to menstruate and will fail to develop, because her genital organs have not developed nor her body developed at the period of puberty

Girls suffer, a girl at her time of puberty is just as apt to suffer from malaria, from hookworm disease or from tuberculosis—yes, God help us too many of them suffer at that time Puberty apparently does not develop

You have got to get at the underlying disturbing thing that prevents that girl from showing a normal physiological puberty That is the whole point No one drug, or anything else is going to meet it

Q—Now, Doctor, on the assumption that the hypothetical medicinal solution which I have described to you, corresponds to Wine of Cardui, let me read to you the following statement from the Cardui Home Treatment, published in 1912 and copyrighted by the Chattanooga Medicine Company I read from page 24 as follows

> Every girl should take Cardui at the time of puberty It can never do her anything but good"

What is your opinion, Doctor, as to the truthfulness of this statement? *A*—My opinion is that that is pernicious advice to go out to anybody I could paraphrase it in the terms of the street, as saying, 'Being done good"

PREGNANCY

Q—Now, let me call your attention to another paragraph from the same book, copyrighted in 1912, by the Chattanooga Medicine Company I read from page 26, at the bottom of the page, under the heading of "Disorders of pregnancy"

> 'No one need be afraid of taking Cardui during pregnancy Its action is gentle and strengthening, and it can never do anything but good"

Assume again, Doctor, that the hypothetical medicinal solution corresponds to Wine of Cardui What is your opinion in reference to that statement? *A*—That again it is bad advice A woman in pregnancy is fulfilling again a physiological function Unfortunately and rarely, she suffers some of the accidents of pregnancy She may have some faulty implantation of the afterbirth that might make hemorrhages

Unfortunately, a woman that is pregnant sometimes has Bright's disease develop, a horrible thing Sometimes a woman gets, because of the pressure of the womb upon the tubes that run from the kidneys, the ureters—will get stagnation of the urine and will have infection of one kidney and pass into chills and fever in consequence

Sometimes a woman pregnant has already a disease She has heart disease from some old rheumatism—old heart disease from a past rheumatism—or she has tuberculosis, or she has malaria

She is subject to disease as any other woman But, with these exceptions that I have named, anywhere from 90 to 95 per cent of the women pass through pregnancy without any disease They suffer some, as women alone can bear suffering but it is the natural state of motherhood that she is suffering and if she is suffering that way she takes many simple remedies.

That mother is delivered in 90 to 95 per cent of the cases normally, and by that word "normally" I mean without any interference with the labor as an instrumental delivery, and she is delivered without injury to herself or to her child

That is normal, and 90 to 95 per cent of women pass through their pregnancy without any abnormality, and are delivered normally Therefore I answer the question that, to take any medicine—I don't care what it is—because it can do no harm, and will always do her good, is absolutely bad.

PAIN IN THE BACK

Q—Doctor, I read from the Ladies' Birthday Almanac, published by the Chattanooga Medicine Company, the 1913 edition I read from page 3 "Right there." There is a picture of a lady standing erect with her hand on her back (Pamphlet shown to witness.)

Just look at the picture, *Doctor* (Reading)

> "That is where the pain is, in the small of your back It is terrible, nerve racking and unbearable You just cannot work Don't let it keep up, stop it Take a dose of Cardui, the Woman's Tonic Lie down for a short rest In a few moments you will feel much better Take Cardui regularly for a few days It will make all the difference in the world Keep it up till the pain is gone, and you will have got back your strength Won't you thank Cardui? Yes you will as thousands of others have done, and are doing every day Try this plan of treatment It may be just what you need'

In the same Almanac Doctor I read from page 27

> "Those dizzy spells Liver trouble is the cause mostly of those dizzy spells It also causes nausea or sick stomach and bad breath yellow eyes and complexion Headache Constipation, chills and fever, rheumatism indigestion, and similar symptoms When your liver is wrong you cannot be right. It is the largest organ in your body"

I read from page 27—

Mr Hough —Have you finished that?

HEADACHE

Mr T J Scofield —I see that it relates to black draught and that is not the quotation that I desire. Omit the last Doctor which I have just been reading to you in regard to those dizzy spells. I now read from page 27

> "Oh that headache. Of course headache is only a symptom but it is a mighty miserable thing to have and when it becomes a regular visitor it begins to be a calamity
>
> 'Wine of Cardui will not act like a nerve deadener to kill the pain of headache but it goes down to where the real trouble is, and begins at once to remove the cause, the female inflammation irregularity or other form of womanly disease In this way after a few days the headache most likely disappears, and when the real trouble is cured it stops those regular visits Try the Cardui treatment for headache and other womanly pains'

Assume now Doctor that this pamphlet the Almanac of 1913 is printed in quantities of approximately twenty millions of copies, and is distributed to the women all over the country Have you an opinion as to what the effect of reading such a statement would be on women who are not suffering from any definite disease, but who may be influenced by suggestion?

Mr Walker —That is objected to

THE COURT —Have you finished your question?

Mr T J Scofield —Yes sir

THE COURT —He may answer

Mr Walker —"Have you an opinion of what women will think after reading that?' That is what the question amounts to

THE COURT —He is giving his professional opinion, that is all

Mr Hough —That is not his professional opinion at all That is not a professional opinion as to what a woman would think from reading that.

THE COURT —But what he thinks she would think is his opinion

Mr Hough —I know, but that is not his professional opinion

THE COURT —Based upon his experience

Mr Walker —If he has had any experience with women that have read that, that would be something in reference to that subject, but he has not and he is asking him now to pass on what a woman might think after reading it, which is something that is not even involved in the book

THE COURT —Why don't you change the form of the question, Mr Scofield? In the first place you have two extracts from the book, and they involve perhaps different disorders Why not separate them, and find out first if the witness has any opinion as to what effect Wine of Cardui would have for that particular disorder

Mr T J Scofield Q —Doctor do you have in mind the last excerpt which I read

> 'Oh that headache Of course headache is only a symptom, but it is a mighty miserable thing to have and when it becomes a regular visitor it begins to be a calamity Wine of Cardui will not act like a nerve deadener and kill the pain of headache right off, but it goes down to where the real trouble is and begins at once to remove the cause the female inflammation irregularities, or other form of womanly disease In this way after a few days the headache most likely disappears and when the real trouble is killed it stops those regular visits Try the Cardui treatment for headache and other womanly pains"

Now then Doctor assuming that Wine of Cardui is practically the same thing as the hypothetical medicinal solution which I called your attention to have you any opinion as to whether Wine of Cardui will do these things that are claimed for it in this excerpt, which I have just read *A* —I have

Q —What is that opinion? *A* —In the first place it assumes that the cause of headache in woman is a pelvic condition which is not true It may be a cause of headache but there are many others

It assumes that if a woman has pelvic disease—and I assume I suppose it assumes an organic disease—that it will remove that and therefore remove that cause of the headache with which I disagree

It is altogether bad because a woman is just as subject or more subject to headache from various causes as a man and if that headache —if she suffered from an organic disease that was removable that might be removed if attended to properly it would be absolutely harmful for her to play with medication applied to some part of her body which she thinks is the cause of her headache.

Bright s disease with the poison which comes from it is common to man and woman and headache is one of the most common symptoms of the severe intoxication of that disease fearful headaches No medicine you could apply would entirely stop it It may relieve by relieving the conditions temporarily of the poison in the body

Tumor of the brain, to which any of us are subject, causes pressure within the skull, and excruciating headache

There is a type of headache from which many human beings suffer, that is periodical People are sick at the stomach They are depressed physically and mentally, they have disturbed vision This is one sided often and therefore is called hemicranial, meaning half skull, or half side of the head That runs frequently in families They don't inherit the headache, but they inherit a nervous constitution which don t stand the wear and tear of life, and if they abuse themselves in any way, knowingly or unknowingly, they have some of those headaches

If they suffer from disease whether of the pelvic organs or of the kidneys, or of the stomach, or anything else If they have faulty vision If they have bad hearing, and have to strain to hear If they have trouble business or domestic If they overeat or if a man over smokes If a woman overdrinks tea or coffee, they have headaches The underlying cause always has to be approached and the remedies are nothing compared with the correction of the habits in that condition

So I could go on and talk to you for half an hour or longer about headaches of different varieties, to which all of us, including men and women are subject One must remove the cause, if it can be done, before one can relieve the individual permanently

We can palliate, we can relieve for the time being, a headache with various things But that does not restore the individual to a condition of health when he no longer has headaches That is mere relief, palliation

Q —Now Doctor have you an opinion, as to what would be the effect if any of such an excerpt as I have read here, if it should fall into the hands of a woman, by way of suggestion

Mr Hough —That is objected to

Mr T J Scofield —Well who had the underlying conditions which you have just been describing?

THE COURT —It seems to me the proper way to effect that is to have the doctor state what his experience has been with women in general as to what susceptibility they may have to suggestion Then, when you argue to the jury, you may apply the evidence in this case But Dr Billings of course cannot tell what any individual woman thinks, or what women in general think He may tell his experience as to the susceptibility of women to lend themselves to suggestion

Mr T J Scofield —Well, just answer the question, as it has been suggested by the court.

Mr Walker —May we take an exception?

THE COURT —Yes the point will be saved

To which ruling of the Court the plaintiffs etc. excepted

A —Women like all other parts of human kind, are apt to believe what they read and especially to believe what we read about health and disease It has been my experience that people will believe what they read in print rather than to believe someone who is absolutely qualified to tell them about themselves by word of mouth

Consequently, people reading of remedies of any kind are more apt to take them than if they simply heard of them by word of mouth and especially if in the wording of the remedy described many symptoms are enumerated, which may, like a shot gun hit something that individual has once in a while and they therefore will apply the remedy

Mr T J Scofield Q —Now, Doctor what would be the effect in your opinion of a woman taking a medicine containing the equivalent of 96 drops of whisky three or four times every day during pregnancy during puberty and during the menopause, with reference to the danger of causing the formation of an alcoholic habit? *A* —That would depend upon the individual. Some people will form a habit easily with any drug that affords any sort of a pleasurable or comfortable sensation Other people do not

The effect is also in a sense different upon different individuals A small quantity of alcohol, as much as named 48 drops three or four times a day may be of inestimable harm to some people and apparently another individual will take it for a long time without any perceptible effect upon him

To illustrate I have known—I had a patient under my charge who suffered from what we call hardening of the liver sclerosis of the liver who took one drink of whisky a day for years That is all he ever *permitted himself to take* and as I knew him intimately, I know he told me the truth

Sclerosis of the liver is an increase in the fibers in the liver until it shrinks down into a hard mass all covered over with little lumps like the hob nails of a shoe and it shrinks down until it no longer functionates, and the individual gets dropsy and dies

I have known also a man whom I had under my charge for years with his family who drank one quart of whisky a day for twenty years before he got sclerosis of the liver He drank whisky for years in enormous amounts

So that no one can say that taking a group of individuals that 48 drops of alcohol could not make a habit with that group of individuals It may It may make it in more than one. It may have harmful effects upon the stomach, upon the liver upon the kidneys in that group of individuals On some of them it may have no effect at all

But it is a bad thing to ask anybody, or a community of individuals or an individual to take a dose of alcohol or that amount of alcohol because it is surely apt to do damage to some of them.

Mr T J Scofield —That is all Doctor

(*To be continued*)

Correspondence

Treatment of Incised Wounds Involving Tendons

To the Editor —That the usual treatment of incised wounds involving tendons at their primary dressing is faulty is attested by the fact that a large number of fingers have to be amputated because of subsequent infection While a large number of cases are infected from beginning, a certain percentage become infected from improper handling under unfavorable surroundings There is abundant evidence to prove that the operating room is the place to suture tendons, and that only a limited number of cases are favorable for the immediate repair of the severed tendons

In my hospital service I have insisted that patients with these injuries be sent at once to the operating room, simply a sterile dressing being applied in the dispensary

Absolute asepsis in the handling of these clean tendon cases is the first requisite, for the delicate endothelial lining of the tendon sheaths has little or no resistance against invading organisms If the tendon is sutured in the face of any infection, or if infection subsequently develops, there is distinctly more loss of tendon and hence greater impairment of function than in cases in which no primary repair was attempted Although good results have been obtained in the primary suturing of tendons when done in the physician's office or the surgical dispensary, yet the fact remains that an unnecessary risk is taken, and the practice is to be condemned

Patients applying for treatment can be roughly grouped into three classes

1 Clean cases
2 Cases in which infection is liable to occur
3 Cases in which infection is already present

In all cases coming under Class 1, the physician should carefully scrub his hands and put on gloves before making any examination The surrounding skin is painted with 5 per cent tincture of iodin, the wound washed out with normal saline solution at body temperature, and a sterile dressing applied The part is dressed on a splint and the patient taken to a hospital for the repair of the tendons If hospital facilities are not available and the physician has to suture in his office, the same aseptic technic should be carried out as if the peritoneum was to be opened

Cases coming under Class 2 are treated in the same manner as those in Class 1, except that no attempt at suturing is done Also the patient is instructed to keep the parts soaked with a mild antiseptic solution If no infection occurs, suturing is permissible after seven days, the same rules holding good as in clean cases If infection does occur, the wound is kept wide open and the parts soaked for fifteen minutes in every hour in a weak antiseptic solution The various conditions arising must be cared for as they occur These patients have their secondary operation for the repair of the tendons in about six to eight weeks after the wound has healed

For those cases in which infection is already present, the treatment will depend largely on conditions found, the principal point being to supply adequate drainage Bier's hyperemia, wet dressing and rest will in the majority of cases assist in getting rid of the infection In these cases it is well to wait about three months after the infection has subsided before doing a secondary tenorrhaphy

Clean cases referred to me at the hospital are taken at once to the operating room, the dressings removed and the hand painted (wound excepted) with 5 per cent tincture of iodin The wound is gently irrigated with a mild antiseptic solution for about fifteen minutes Under nitrous oxid anesthesia the tendons are sutured, fine arterial needles and 00 catgut or silk being used To bring the torn flexor tendons into the wound, the hand is strongly flexed, for the extensor, strongly extended No instruments are used to grasp the tendons, and the practice of grasping the severed ends with hemostats is mentioned only to condemn it Two or three mattress sutures and one or two interrupted ones are used on the tendons The wound must be absolutely dry before it is closed If this is impossible, a few strands of silkworm gut are inserted to prevent blood clot The hand is dressed on a splint, in the case of the flexed tendons, over a rolled bandage so as to relieve tension on the tendons

GEORGE M DORRANCE, M D, Philadelphia

Exhaustion of the Supply of Ichthyol

To the Editor —Owing to the restrictions which the belligerent countries have placed on the shipment of drugs and chemicals to the United States, we have recently found it necessary to advise the drug trade that we can no longer supply ichthyol Ichthyol is manufactured only in Germany, from raw material found only in Austria We are the sole importers, and our supply has become exhausted You are aware, of course, that both national and state officials are at present engaged in prosecuting dealers in fraudulent substitutes for ichthyol

We believe that it is to the interest, not only of Merck & Co, but also of the medical profession, that this state of affairs should be known to physicians

MERCK & Co, New York

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed Every letter must contain the writer's name and address, but these will be omitted, on request.

INOCULATION FOR HAY FEVER

To the Editor —Where can I find information bearing on the subject of inoculation for hay fever?

J S CARPENTER, JR M D, Pottsville, Pa

ANSWER —*The following is a partial list of references on this subject, covering 1915 and 1916*

Oppenheimer, S, and Gottlieb, M J Pollen Therapy in Pollinosis, *Med Rec*, New York, March 18, 1916, abstr, THE JOURNAL, April 1, 1916, p 1058

Strouse, S, and Frank, I Pollen Extracts and Vaccines in Hay Fever, THE JOURNAL, March 4, 1916, p 712

Noyes, M L Report of Two Hay Fever Cases Treated With the Pollen Extract, THE JOURNAL March 4 1916, p 738

Morrish, R S Treatment of Asthma and Hay Fever by Active Immunization, *Michigan State Med Soc Jour* August, 1915

Iskowitz, H *Multi Pollen Vaccines in Treatment of Hay Fever, Med Rec* New York, Aug 14, 1915

Oppenheimer, S, and Gottlieb, M J Immunization of Pollenosis, *New Jersey Med Soc Jour* September, 1915, abstr, THE JOURNAL Sept 25, 1915, p 1142

Goodale, J E Pollen Therapy in Hay Fever, *Ann Otol, Rhinol and Laryng*, June, 1915

Goodale, J L Pollen Therapy in Hay Fever, *Boston Med and Surg Jour*, July 8, 1915

Oppenheimer, S, and Gottlieb, M J Pollinosis (Hay Fever) Consideration of Its Treatment by Active Immunization, *Bull Med Chir Fac Maryland*, July, 1915, abstr, THE JOURNAL July 31, 1915, p 460

Oppenheim, Seymour, and Gottlieb, Mark J The Active Immunization of Hay Fever, *New York Med Jour* Feb 6, 1916

Manning E T Hay Fever Its Treatment by Injection of a Solution of Ragweed Pollen, THE JOURNAL, Feb 20 1915, p 655

Cook, R A Treatment of Hay Fever by Active Immunization, *Laryngoscope*, February, 1915

LITERATURE ON PITUITARY BODY

To the Editor —Please refer me to recent articles, last year or so, in THE JOURNAL, on the pituitary body, pituitrin and pituitary extract

PEYTON GREEN, M D, Wytheville, Va

ANSWER —The following is a list of references to articles on this subject

Kahn, H, and Gordon, L E The Use of Pituitary Extract as a Coagulant in the Surgery of the Nose and Throat, THE JOURNAL, Jan 23, 1915, p 301

Weed, L H, and Cushing, H Studies on Cerebrospinal Fluid Effect of Pituitary Extract on Its Secretion (Choroidorrhea), *Am Jour Physiol*, January, 1915, abst, THE JOURNAL, Feb 20, 1915 p 693

Simpson, S, and Hill, R L Effect of Repeated Injections of Pituitrin on Milk Secretion *Am Jour Physiol*, February, 1915 abst, THE JOURNAL March 6, 1915, p 856

Robertson, T B, and Burnett, T C Influence of Anterior Lobe of Pituitary on Growth of Carcinomata, *Jour Exper Med*, March, 1915, abst, THE JOURNAL, March 27, 1915, p 1108

Quigley T K Pituitary Extract in Obstetrics The Journal April 10 1915, p 1222

Pituitary Standardization, editorial, The Journal April 10, 1915, p 1249

Hewlett, A. W Effect of Pituitary Substances on Fever Pulse *Michigan State Med Soc Jour*, April, 1915 abstr, The Journal April 17 1915 p 1360

Drugs Which Stimulate Sympathetic Endings Pituitary, The Journal April 24, 1915 p 1399

Norris R C. Use and Abuse of Pituitrin in Obstetrics, *Am Jour Obst* May 1915 abst, The Journal May 29 1915, p 1874

Ludlum S D W, and Corson White E P Thymus and Pituitary in Dementia Praecox *Am Jour Insan*, April 1915, abstr, The Journal, June 5, 1915, p 1939

Zullig Rupture of Uterus Under Hypophysis Extract, *München med Wchnschr* June 1, 1915 abstr, The Journal July 24, 1915 p 367

Fry H J B Pituitary Gland in Diabetes Mellitus and Disorders of Glands of Internal Secretion *Quart Jour Med* July, 1915 abstr The Journal Aug 7 1915 p 561

Sewall E C. Operation on the Hypophysis According to Hirsch s Method Presentation of Case with Brain, Eye and Other Symptoms The Journal, Aug 21 1915 p 681

Composition of the Pituitary Body editorial The Journal Sept 4 1915 p 882

Kupferle L., and von Saly A Radiotherapy of Hypophysis Tumors *Deutsch med Wchnschr* July 29, 1915 abst, The Journal Sept 11 1915, p 985

CORNEAL TRANSPLANTATION

To the Editor —In The Journal for April 29, p 1419, you say

> Recent improvements in the technic of corneal trans plantation have made this a useful surgical procedure in some of these conditions

Kindly advise me if you were referring to a particular operation that is successful in corneal transplantation or were making a general statement?

D W Stevenson M D, Akron, Ohio

Answer —The general operation of keratoplasty was referred to This operation would be justifiable only in selected cases in which the leukoma was extensive enough to cover the entire cornea, and in which an operation for optical iridectomy would not offer any prospect of success The original answer covered a lesion probably more extensive than it was intended to convey

EYE EAR NOSE AND THROAT JOURNALS

To the Editor —Please give me the name and address of all the journals published in this country devoted to the eye ear nose and throat.

Samuel Kennedy M D, Shelbyville Ind.

Answer —The following is a list of such journals

Ophthalmic Literature Majestic Building Denver Established 1911 Edward Jackson editor and publisher monthly $5

Ophthalmic Record 7 West Madison Street Chicago Established 1891; H A Fox publisher; Frank Brawley, editorial secretary monthly, $4

Journal of Ophthalmology and Oto Laryngology 32 North State Street Chicago Established 1906 Willis O Nance and Albert H Andrews editors and publishers monthly $2

The Index of Oto Laryngology 108 North State Street Chicago Established 1911 Joseph C. Beck editor and publisher monthly $5

American Journal of Ophthalmology Metropolitan Building St Louis Established 1884 Adolf Alt editor and publisher monthly $3 50

Annals of Ophthalmology Mermod Jaccard Building St Louis Established 1892 Mr Jones H Parker publisher, Meyer Wiener and Clarence Loeb editors quarterly $4

Annals of Otology Rhinology and Laryngology St. Louis Established 1892 Mr Jones H. Parker, publisher H W Loeb editor quarterly $4

Laryngoscope 3858 Westminster Place, St. Louis Established 1896 M A Goldstein editor and publisher monthly $5

Archives of Ophthalmology New York. Established 1869 G P Putnam s Sons publishers Arnold Knapp editor bimonthly $5

Journal of Ophthalmology Otology and Laryngology 414 Walnut Street Cincinnati Established 1889 Cramer Publishing Company publishers G W Mackenzie editor monthly $3

Ophthalmology Cobb Building Seattle Established 1904 H. V Wurdemann editor and publisher quarterly $5

ERADICATION OF TATTOO MARKS

To the Editor —Can you supply us with any references on the subject of the eradication or obliteration of tattoo marks. We have gone over our files but have failed to find any references on the subject

Frances Frisbee, Tacoma, Wash.
Librarian Tacoma Academy of Medicine

Answer —Articles on the removal of tattoo marks appeared in The Journal in the Queries and Minor Notes Department Aug 22 1911 Sept 12, 1912, and Jan 24, 1914 In these articles the treatment of this condition was discussed

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Alaska Juneau July 5 Sec Dr H C De Vighne Juneau

California San Francisco June 27 Sec, Dr Charles B Pinkham R 527 Forum Bldg, Sacramento

Colorado Denver, July 4 Sec, Dr David A Strickler 612 Empire Bldg Denver

Delaware Dover and Wilmington, June 20 22 Sec Dr H W Briggs 1026 Jackson St, Wilmington

Florida Jacksonville June 13 14 Sec Dr E W Warren Palatka

Georgia Atlanta and Augusta June 1 Sec, Dr C T Nolan Marietta

Illinois Chicago, June 21 23 Sec Dr C St Clair Drake, Springfield

Iowa Iowa City, June 8 10 Sec, Dr Guilford H Sumner, State House Des Moines

Kansas Topeka June 13 Sec Dr H A Dykes Lebanon

Kentucky Louisville, June 13 15 Sec, Dr A T McCormack Bowling Green

Louisiana New Orleans June 8 10 Sec, Dr E L. Leckert 716 Macheca Bldg New Orleans

Maine Augusta, July 6 7 Sec, Dr Frank W Searle, 776 Congress St Portland

Michigan Detroit June 1 3 Ann Arbor June 19 21 Sec., Dr B D Harison, 504 Washington Arcade Detroit

Minnesota Minneapolis June 6 9 Sec, Dr Thomas S McDavitt, 814 Lowry Bldg St Paul

Mississippi Jackson June 20 21 Sec Dr J D Gilleylen Jackson

Missouri St. Louis June 13 15 Sec, Dr J A B Adcock Jefferson City

Nebraska Lincoln, June 8 9 Sec, Dr H B Cummins Seward

New Hampshire Concord, June 26-27 Sec, Dr W T Crosby The Beacon Manchester

New Jersey Trenton June 20 21 Sec, Dr Alexander MacAlister 429 E State St, Trenton

North Carolina Raleigh, June 27 30 Sec Dr H. A Royster Raleigh

North Dakota Grand Forks, July 4 Sec., Dr G M Williamson, Grand Forks

Ohio Columbus June 6 9 Sec. Dr George H Matson State House Columbus

Oregon Portland, July 5 7 Sec, Dr L. H Hamilton, Medical Bldg Portland

Rhode Island Providence July 6-7 Sec, Dr Gardner T Swarts Room 313 State House Providence

South Carolina Columbia June 13 Sec, Dr A. Earle Boozer 1806 Hampton St Columbia

Tennessee Knoxville Memphis and Nashville June 16 17 Sec Dr A. B DeLoach Scimitar Bldg Memphis

Texas San Antonio June 27 29 Sec. Dr John S McCelvey Temple State Bank Bldg, Temple.

Utah Salt Lake City, July 3 Sec., Dr G F Harding 407 Templeton Bldg Salt Lake City

Virginia Richmond, June 20 23 Sec. Dr J N Barney, Fredericksburg

Washington Tacoma July 4 Sec, Dr C N Suttner, Walla Walla

Wisconsin Milwaukee June 27 29 Sec Dr J M Dodd 220 E Second St, Ashland

Wyoming Laramie June 14 16 Sec Dr H E McCollum Laramie.

Scholarships and Loan Funds in Medical Schools

Official statements received from the various medical colleges show that of the ninety-five now holding sessions, forty-seven have provided free scholarships or loan funds, or both, for deserving students who are without means otherwise to procure a medical education In two instances (Alabama and Georgia) the scholarships are for residents of the state, but in the other colleges they are, with a few possible exceptions, open to all applicants These scholarships sometimes merely cover tuition fees, but most of them cover all fees for the year, and some cover fees for the four years A few furnish the student in addition with funds for part or all other expenses Altogether the reports received indicate that there are 296 scholarships in forty-two medical schools and that loan funds have been provided by eighteen medical schools It is quite evident, therefore, that no students who deserve to succeed need to be shut out from obtaining a medical education It is interesting to state that all but three of the institutions providing scholarships are high grade medical schools having been rated in Class A by the Council on Medical Education The colleges having scholarships and loan funds are as follows

SCHOLARSHIPS IN MEDICAL SCHOOLS

University of Alabama School of Medicine	66
Leland Stanford Junior University School of Medicine	3
University of California Medical School	1
University of Colorado, School of Medicine*	1
George Washington University Medical School*	2
Georgetown University, School of Medicine	2

Atlanta Medical College	12
University of Georgia, Medical Department	1
Hahnemann Medical College and Hospital, Chicago*	5
Northwestern University Medical School	9
Rush Medical College	6
University of Illinois, College of Medicine*	7
Indiana University, School of Medicine*	10
Bowdoin Medical School	1
Johns Hopkins University, Medical Department	7
University of Maryland, School of Medicine	6
Boston University, School of Medicine*	30
Medical School of Harvard University*	27
Detroit College of Medicine and Surgery	3
University of Minnesota Medical School*	1
Washington University Medical School	1
University of Missouri, School of Medicine	1
Dartmouth Medical School	2
lumbia University, College of Physicians and Surgeons	36
University of Buffalo, Department of Medicine	1
New York Medical College and Hospital for Women	1
Syracuse University, College of Medicine	1
University of North Carolina, School of Medicine	1
University of Cincinnati, College of Medicine	10
Western Reserve University, School of Medicine	1
University of Oregon, Department of Medicine	2
Hahnemann Medical College and Hospital of Philadelphia*	3
Jefferson Medical College	2
University of Pennsylvania, School of Medicine*†	3
Woman's Medical College of Pennsylvania*	1
Medical College of the State of South Carolina	7
University of Tennessee, College of Medicine	1
Meharry Medical College	5
Vanderbilt University, Medical Department	4
University of Texas, Department of Medicine*	1
Medical College of Virginia	10
University of Virginia	2
Total in 42 medical schools	296

* Have loan funds also

† Has fifty or more scholarships for graduates of Philadelphia high schools

LOAN FUNDS

The colleges above which are marked by an asterisk (*) also have loan funds for deserving but needy students Such funds are available also at other medical schools, as follows

Yale University, School of Medicine, New Haven, Conn
Howard University, School of Medicine, Washington, D C
Tulane University of Louisiana, School of Medicine New Orleans
University of Nebraska, College of Medicine Omaha
University of North Dakota College of Medicine, University, N D
University of Wisconsin Medical School, Madison, Wis

Proportion of Physicians to Population in the United States

The accompanying table shows that the present proportion of physicians to population in the United States ranges from one to 365 in the District of Columbia to one to 1,217 in North Dakota, the average in the entire country being one physician to every 691 people In his report on Medical Education in Europe, Abraham Flexner showed that in 1912 the proportion of physicians to population in the German empire was one to 1,940, in Austria, one to 2,120, and in France, one to 2,834 In the table the figures regarding population are from the 1915 estimate of the United States Census Bureau and the totals of physicians are from the fifth edition of the American Medical Directory, just published The table follows

PROPORTION OF PHYSICIANS TO POPULATION

State	Population	Physicians	People to Each Physician
Alabama	2,301,277	2,569	892
Arizona	247,299	307	806
Arkansas	1 713,102	2,637	649
California	2,848,275	5,687	501
Colorado	935,799	1,733	540
Connecticut	1,223,583	1,678	728
Delaware	211 598	261	811
District of Columbia	358,679	1,482*	365
Florida	870,802	1,321	659
Georgia	2,816,289	3,421	823
Idaho	411,996	439	939
Illinois	6,069,519	10,648	570
Indiana	2,798,142	4,872	574
Iowa	2,221,038	3,751	592
Kansas	1,807,221	2,683	674
Kentucky	2,365,185	3,584	660
Louisiana	1,801,306	2,060	874
Maine	767,638	1,205	637
Maryland	1,351,941	2,292	546
Massachusetts	3,662,339	5,869	624
Michigan	3,015,442	4,360	692
Minnesota	2,246,761	2,447	918
Mississippi	1,926,778	2,048	941
Missouri	3,391 789	6,399	530
Montana	446,054	636	717
Nebraska	1,258,624	1,911	659
Nevada	102,750	154	667
New Hampshire	440,584	690	639
New Jersey	2,881,840	3,239	889
New Mexico	396,917	430	923
New York	10,086,568	15,670	646
North Carolina	2,371,095	2,102	1,128
North Dakota	713 083	586	1,217
Ohio	5,038,627	8,045	626
Oklahoma	2,114,307	2,634	803
Oregon	809,490	1,187	741
Pennsylvania	8,383,992	11,502	729
Rhode Island	602,765	772	781
South Carolina	1,607,745	1,399	1,149
South Dakota	680,046	676	1,006
Tennessee	2,271,379	3,457	657
Texas	4,343,710	6,240	693
Utah	424,300	465	912
Vermont	362,452	668	543
Virginia	2,171 014	2,547	852
Washington	1,471 043	1,695	868
West Virginia	1,359,474	1,729	783
Wisconsin	2,473 533	2,803	882
Wyoming	174,148	251	694
Totals	100,399,318	145 241	691

* This total includes about 500 physicians who are connected with the government medical services and who are not in practice among the civilian population of the District of Columbia Including these there would be one physician to every 242 people.

Minnesota January Report

Dr Thomas S McDavitt, secretary of the Minnesota State Board of Medical Examiners, reports the oral, practical and written examination held at Minneapolis, Jan 4-6, 1916 The total number of subjects examined in was 16, total number of questions asked, 80, percentage required to pass, 75 The total number of candidates examined was 6, of whom 5 passed and 1 failed Eleven candidates were licensed through reciprocity The following colleges were represented

PASSED

College	Year Grad	Per Cent
Chicago College of Med and Surg	(1915)	81
Harvard University	(1915)	91
St Louis University	(1915)	88
University of Pennsylvania	(1914)	90
University of Toronto	(1906)	87

FAILED

College	Year Grad	Per Cent
Hamline University	(1904)	67

LICENSED THROUGH RECIPROCITY

College	Year Grad	Reciprocity with
Northwestern University	1907)	Illinois
Rush Medical College	(1912) Illinois, (1914 2)	Wisconsin
University of Illinois	(1915)	Illinois
State University of Iowa College of Medicine	(1898)	Iowa
College of Phys and Surgs, Baltimore	(1904)	Illinois
Johns Hopkins University	(1913)	Maryland
Washington University	(1908)	Illinois
Marquette University	(1913)	Wisconsin
Western University, London	(1907)	Iowa

New Mexico January Report

Dr W E Kaser, secretary of the New Mexico Board of Health and Medical Examiners, reports the written examination held at Santa Fe, Jan 10-11, 1916 The total number of subjects examined in was 13, total number of questions asked, 100, percentage required to pass, 75 The total number of candidates examined was 2, both of whom passed Two candidates were licensed through reciprocity and 14 on satisfactory credentials The following colleges were represented

PASSED

College	Year Grad	Per Cent
Bennett Medical College	(1911)	80
Medico-Chirurgical College of Kansas City	(1901)	79

LICENSED THROUGH RECIPROCITY

College	Year Grad	Reciprocity with
John A Creighton Medical College	(1915)	Kansas
Gate City Medical College*	(1904)	Oklahoma

LICENSED ON SATISFACTORY CREDENTIALS

College	Year Grad	Total No Licensed
University of Alabama	(1909)	1
College of Physicians and Surgeons, Los Angeles	(1914)	1
University of Southern California	(1904)	1
Denver College of Medicine	(1899)	1
University of Colorado	(1913)	2
Northwestern University	(1912)	1
Tulane University of Louisiana	(1886)	1
University of Louisville	(1911)	1
University of Buffalo	(1912)	1
Cleveland College of Physicians and Surgeons	(1910)	1
University of Oklahoma	(1912)	1
Medico Chirurgical College of Philadelphia	(1913)	1
National School of Medicine Mexico	(1913)	1

* This college was officially reported as not recognized by the Texas State Board of Medical Examiners

Medicolegal

Duty to Discharge Persons Restored to Sanity

(Lawrence vs Barlow et al (W Va), 87 S E R 380)

The Supreme Court of Appeals of West Virginia reverses a judgment which dismissed habeas corpus proceedings instituted by the petitioner to secure his discharge after he had been committed to a hospital for the insane, and it orders his release Many witnesses were examined in relation to the sanity of the petitioner The physicians called by the defendants said that he had paranoia The superintendent of the hospital thought that he had been suffering from it since 1887 But it was said that this theory was repelled by the fact that he was in an insane asylum in Pennsylvania in 1887 and released as restored, that he was again in a hospital in 1895, and in an insane asylum in California for a period in 1902, and again released as restored, that he was not afflicted this way again until 1913, that during the lucid periods he was a good citizen and prosperous business man, that he was released on bond from the hospital in January, 1914, and his trial was had in November, 1914, and that he was out of the hospital about ten months without injury to himself From this undisputed history it would seem, the court says that the hospital physicians were mistaken in their diagnosis, or in the progressive nature of the disease But without discussing or calling into question the correctness of their theories, it was quite certain that there was abundant reliable testimony in the case to show conclusively that, if the petitioner was insane when he was committed to the hospital in 1913, he had been sufficiently restored at the time of the trial on the habeas corpus proceeding to make it improper to continue him in confinement. Should the theory of the hospital physicians prove correct, and the malady from which they said he was suffering progress until it should reach the stage that he would be unable to care for himself or his property, and it should become necessary for some one to care for him, then the hospital for the insane provided for such purpose by the state would be to him a haven of mercy, until then it would be a place of torment Under the code of West Virginia any person confined in one of the hospitals for the insane of the state as an insane person, "except in the case of a person charged with crime and subject to be tried therefor, or convicted of a crime and subject to be punished therefor, when in a condition to be so tried or punished," may be delivered to any friend who will give bond and security with the conditions mentioned in Section 10 of Chapter 58 If such person shall be restored to sanity while in the custody of such bondsmen, it is the duty of the persons having control of such hospital to discharge him from such custody and give him a certificate thereof If the persons in charge of such hospital fail or refuse to release such person from custody after reasonable demand, the writ of habeas corpus is a proper remedy to secure such release

Sufficient Evidence of Violating Medical Act—Instructions to Jury

(State vs Booher (Iowa) 155 N W R 167)

The Supreme Court of Iowa affirms a judgment of conviction of practicing medicine without a license The court says that the defendant contended that the evidence was not sufficient to show that he was guilty of violating the state medical act, or that he held himself out as a physician and surgeon, or that he publicly professed to cure and to heal, or that he made a practice of healing and curing The evidence was short The substance of it was that one witness went to the defendant's house for the purpose of ascertaining if the defendant would treat him for rheumatism, he said he did not remember what the defendant told him, but he took four or five treatments, the treatments being performed while the witness was lying on a sort of cabinet or bench and the defendant worked on his spine and legs The witness did not have any arrangement as to charges and never paid the defendant anything Another witness testified that the defendant came to his house and gave him a treatment This was done by an adjustment of some of the joints of the witness' spine He was stretched out on a bench which the defendant had brought with him This witness took three or four treatments and gave the defendant $5 A third witness said that the defendant treated his wife for goiter, treatment was administered by rubbing the goiter and rubbing the spine, the patient also had gas on the stomach, and the defendant rubbed the stomach She took twenty-four treatments, and for the services rendered to her the defendant received $20 A fourth witness testified that he had one of his arms out of place, that he had sought treatment without avail, and, finally meeting the defendant on the street, asked him to see if he could put his arm in place, which he did The court thinks the evidence was sufficient to take the case to the jury on the question as to whether or not the defendant assumed the duties of a physician, and that he publicly professed to cure and heal Nor was an otherwise correct instruction given to the jury erroneous because it omitted the thought, embodied in a similar instruction requested by the defendant, that it must be shown by the state that the defendant did publicly profess to be a physician, or surgeon, or obstetrician, and assume the duties of such, or that he made a practice of prescribing and furnishing medicine for the sick, etc These things are prohibited by the statute, but the statute provides that any person shall be held as practicing medicine, surgery or obstetrics who shall publicly profess to be a physician, surgeon or obstetrician, and it also provides that if a person practices medicine, surgery or obstetrics, or publicly professes to cure or heal, he is guilty, etc Neither was there error in a refusal to give an instruction which embodied the same thought and the further thought that the defendant did not tell the patients that he could cure or heal them An instruction was given that "the word publicly means openly, a declaration made in a public manner" while an instruction was requested by the defendant to the effect that the word publicly means "openly, a declaration publicly made, or in a public manner" There was no material difference in the two

Burden of Proof in Actions for Negligence

(Niebel et al vs Winslow (N J) 95 Atl R 995)

The Court of Errors and Appeals of New Jersey, in reversing a judgment recovered by the plaintiffs, holds that, in an action for damages against a physician for the negligent performance of a surgical operation, in that a gauze sponge was negligently left in the abdomen of the plaintiff, it was injurious error to charge the jury at the request of counsel that, If you find that the gauze was left in the abdomen of plaintiff and the incision sewed up by defendant or allowed to heal over it, the burden of proof is on defendant to show that it was not left there by any carelessness or negligence of his In an action of negligence, the burden of proving the negligence of the defendant is on the plaintiff, and, as a proposition of law for the jury's guidance at the close of the case, it never shifts to the defendant. This right of the defendant to have the plaintiff bear the burden of the affirmative is a substantial one, the denial of which is injurious error Neither the single fact nor the group of facts stated in the requested charge shifted to the defendant the burden of proof which, notwithstanding such facts, remained with the plaintiff The facts recited were a part of the plaintiff's case, in that they were steps in the establishment of the negligence of the defendant, the burden of proving which was on the plaintiff, the effect therefore of the request was that the jury was told that, if the plaintiff had established these steps in her proof of the defendant's negligence, the burden of exculpating himself from the complete charge of negligence was shifted to the defendant The practically injurious nature of the request will at once be apparent when it is remembered that in this case the operation, although performed by the defendant, a private practitioner, was performed by him in a hospital where he was assisted by trained, resident nurses, presumably *in the employ* of the hospital and familiar with their duties While the testimony was meager as to the precise nature of these duties it was infer-able from the evidence and from the terms "operator" and "assistants" that it was the duty of the latter at or just before the close of the operation to count the sponges in use, which at that critical stage the operator himself could not do without jeopardy to his patient The very meagerness of the proof and the fact that presumptions had to be met and inferences to be drawn made the question of the burden of proof all the more important, since it may well be that the state of the proofs was such that whoever had to bear the burden of proof must fail because of such burden In such a case the burden must remain where the law places it, or the resulting judgment must be reversed Nor was the injurious error of charging the plaintiff's request in any wise cured or rendered harmless by the fact that the correct rule had been stated to the jury in the body of the charge, for how was the jury to know which was the law?

Society Proceedings

COMING MEETINGS

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CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS

Tenth Triennial Session, held at Washington, D C, May 9 10, 1916

The President, Dr William S Thayer, Baltimore, in the Chair

SYMPOSIUM ON SYPHILIS

Diagnosis and Treatment of Syphilis

Dr John A Fordyce, New York The future of the syphilitic individual depends on the early diagnosis of his infection and the intensity with which treatment is carried out in the first six months In the accomplishment of this purpose, the modern aids to diagnosis have rendered great service In primary syphilis, when the spirochetes are demonstrated and the Wassermann reaction is negative, it is possible to cure syphilis with salvarsan alone It cannot be determined how many doses are required It is better, therefore, to err on the side of safety and to give, at least, eight or ten doses and follow this with mercury for six months In secondary syphilis, when the early rash is present and the Wassermann reaction positive, it is better to precede the salvarsan with several injections of a mercurial salt, preferably a soluble one, on account of the economy of time In this way an effect is produced on the spirochetes, and when salvarsan is given the temperature reaction and an intensification of the rash, that is, a Herxheimer reaction, can be avoided After the salvarsan is begun the combined treatment is continued Salvarsan is given in doses of from 0 3 to 0 5 gm for men and from 0.25 to 0 4 gm for women at intervals of one or two weeks, depending on the tolerance of the patient Two or three such courses are given with rest periods of six weeks The mercurial injections are given every day if a soluble salt is employed, or once a week if an insoluble one My preference in case of the former is mercuric chlorid in courses of from twenty to thirty injections, given daily or every other day Of the insoluble preparations, gray oil (in the form of mercurial cream, of which 5 minims represent 1 grain), in series of ten to twelve injections, or mercuric salicylate (40 per cent), from 1 to 3 grains gradually increased, from ten to twelve injections constituting a course Each series is followed by a rest period of six weeks and then the procedure is repeated Wassermann tests are made periodically, but treatment is not interrupted in spite of a negative reaction until the adequate amount of medication has been given

We should keep in mind the possibility of involvement of the nervous system in secondary syphilis A complete record should be made when the patient comes under observation so that it can be compared with any subsequent developments In this way it is possible to detect the very earliest changes which manifest themselves objectively in the nervous system The most frequent are irregularity of the pupils, persistent headache, and optic neuritis or auditory disturbance In latent syphilis, with a positive Wassermann reaction, an investigation should be made of the cardiovascular and nervous systems or of previous involvement of any of the viscera, as, for instance, syphilitic hepatitis In cardiovascular syphilis or bone involvement, the prolonged use of mercury in connection with potassium iodid is probably of more value than the haphazard use of occasional doses of salvarsan The criteria of cure are a negative Wassermann reaction for, at least, a year, continuing so after a provocative injection of salvarsan, and a normal spinal fluid, with the exceptions noted

Treatment of Syphilis of the Central Nervous System

Dr Homer F Swift, New York The best treatment of syphilis of the central nervous system is the prophylaxis of syphilis, next in importance is the proper treatment of syphilis in the early stages No patient should be released from treatment until his cerebrospinal fluid has been normal, in so far as pleocytosis and the Wassermann reaction are concerned At times, there seems to be a slight excess of globulin which cannot be eradicated The problem is complicated by the peculiarities of the subarachnoid space, which is directly continuous with the perivascular, perineural and perineuronal lymph spaces Probably the spirochetes are carried along these channels, as the various lesions can be explained most easily in this way The plugging of these channels probably not only comprises the nutrition of the nerve cells, but also increases the difficulties of bringing the therapeutic agents in contact with the exudate. The separateness of the subarachnoid space from the blood vessels and general lymphatic system is well known Antibacterial immune bodies, vital stains and most drugs are not excreted into the cerebrospinal fluid Even drugs which act on the central nervous system when given by mouth or subcutaneously act in much weaker concentration when injected subdurally In many cases general treatment affects the course of syphilis in the cerebrospinal axis favorably, this is especially marked in the early forms of the disease The tendency of cerebrospinal syphilis to relapse has long been known, while the failure of tabes to respond to mercurial treatment has made therapeutic nihilists of most neurologists Even the marked improvement of most cases of cerebrospinal syphilis is often not followed by a parallel improvement in the cerebrospinal fluid

The desirability of subarachnoid therapy is evident The problem is to find some beneficial therapeutic substance which can be introduced repeatedly without injury to the delicate nerve tissue The preparations used today are (1) the serum obtained from patients shortly after intravenous injections of salvarsan, (2) serum to which small quantities of salvarsan have been added, (3) neosalvarsan in small quantities and weak concentration, and (4) mercurialized serum The direct application of mercury is theoretically of value There is, however, danger of repeatedly injecting mercurialized horse serum because of the liability to the development of a general anaphylactic state In the general treatment of syphilis of the central nervous system, if the patient shows signs of involvement of the cerebral meninges, or brain, salvarsan should be preceded by a short course of mercury to prevent the occurrence of a Herxheimer reaction in the region of the vital centers If the presence of gummas is suspected, a vigorous course of potassium iodid is of value In the meningitis of the secondary period, the response to alternate courses of salvarsan and mercury has been prompt and permanent in a number of my cases In the tertiary form of the disease, alternate courses of mercury and iodid and of salvarsan are usually followed by decided improvement The fluid should be examined before and after each course If it becomes normal after a few months' treatment, the prognosis is good

In tabes, because of the apparent sensitiveness to mercury, it is better to start the treatment with small doses of salvarsan intravenously, gradually increasing and giving an injection a week for six or eight doses If at the end of this course the Wassermann reaction is weaker, then a course of mercury may be tried, followed by another course of salvarsan If the reaction does not change appreciably, intraspinal therapy is of value The aim should be to bring the fluid to normal and keep it there This can be done in a majority of cases 75 per cent of our cases have a negative reaction with 1 c c of fluid, half of them have a negative reaction with 2 c c Fourteen of these remain negative with 2 c.c Only four have shown slight relapses Relapses in the fluid are usually accompanied by clinical relapses In only one patient with normal fluid have there been advanced signs of degeneration, in the presence of rapidly advancing tabes or of optic atrophy, it is desirable to introduce intraspinal therapy in addition to general treatment from the beginning The treatment of paralytic dementia has been disappointing, although the number of remissions and the amount of improvement under salvarsan and serum intraspinally is many times greater than the number of remissions in untreated paretics, and although occasionally the Wassermann in the blood and spinal fluid is negative the ultimate outlook is usually bad In the treatment of syphilis of the central nervous system the objects of therapy are threefold (1) the cure of disease, (2) the amelioration of symptoms, and (3) the prolongation of life With the possible exception of paresis, all of these objects may be obtained

Syphilis and Society

Dr Hugh Cabot, Boston At the outset of any attempt to estimate the value of reporting syphilis as a public health measure, it is necessary to distinguish between true reporting and false reporting True reporting requires that the case be reported to the health authorities by name and address precisely as are cases of other contagious diseases False reporting is reporting by number or by some quasisecret method The opinion of the public health officer is generally in favor of reporting The opinion of the practicing physician, and particularly of those physicians who deal with syphilis on a large scale has been almost unanimously opposed to reporting They reason that if physicians are required to report these patients by name they will in a short time have no patients to report. After a careful study of the question of reporting, I cannot avoid the opinion that it has been worthless as a method of assisting in the control of this particular variety of contagious disease Public opinion has stamped syphilis as a shameful disease, without sufficient justification, and has therefore driven these unfortunate persons into hiding Nine states have legislation which purports to make syphilis a bar to marriage, but in most of them the laws are such as to be absolutely worthless

To sum up the question of the benefit to be derived by reporting cases of syphilis to the public health authorities and the requiring of certificates for marriage, my opinion is this In the present state of public opinion the reporting of syphilis can have no scientific value in the production of statistics and can have no medical value in the control of the disease. Scandinavian countries have undertaken the wholesale treatment of venereal disease as a public undertaking, and though much difference of opinion exists in regard to the details I have heard no adverse opinion in regard to the principle Here, therefore, lies a most fruitful field of effort The state, the municipality and the university or corporation hospital must prepare to deal with syphilis on a large scale not only in regard to diagnosis but also with reference to treatment and subsequent supervision There is no reason why society should fear to separate a patient from the private physician The management of syphilis by the private practitioner has fallen far short of reasonable success in large part because the interests of the community can in no way be safeguarded If public or quasipublic institutions should offer as part of their hospital system thoroughly competent treatment of syphilis it can hardly be doubted that the public in general would at once take advantage of such an offer

Discussion on Symposium on Syphilis

Dr Isadore Dyer, New Orleans In a review of a large number of general hospitals it was ascertained by me that practically all of them refused admission to early or incipient cases of syphilis, that the ambulant case was generally not wanted and that all cases of syphilis as such, are accepted on sufferance The outdoor clinics everywhere show great preponderance over the cases of syphilis in indoor services, and where any statistics could be had, the clinics handled early syphilis almost always without the proper consideration of their danger to the community In spite of these facts, there are many hospitals which practice routine Wassermann tests for one or another reason, but apparently without any purpose directed to the control or prevention of the disease, so far as the early cases are concerned If every case of syphilis with a chancre, or with an early eruption, were hospitalized and treated under compulsion, the disease could be controlled far better than through any system of legislation regulating the report of cases or determining the eligibility of persons for marriage All general hospitals should have special provisions for the indoor care of incipient or acute syphilis, and all men who treat syphilis in public practice should encourage and enforce indoor care of such patients with the object of getting these subjects under proper control, and thereby minimize the spread of the disease Legislation should be directed at enforcing the hospitalization of cases of acute syphilis coming under public charge Educational movement should encourage the public to recognize syphilis as a communicable disease and amenable to isolation just as are scarlet fever, measles and other contagious diseases

Dr. Hugh T Patrick, Chicago I agree that the secret in treating syphilis of the central nervous system depends on early intensive and individual treatment The question is What treatment fulfils these requirements? The administration of mercury with potassium iodid will fulfil the necessary requirements in the majority of cases, provided enough mercury is given What is enough? Enough is to be determined by the results, and not by any given dose To the vast majority of men affected with syphilis one may give two huge inunctions a day without detrimental effect It takes as much as that to constitute adequate treatment of syphilis in man When mercury is given in these doses the mouth must be attended to carefully, which does not mean merely the use of any of the known mouth washes, but it means scrubbing the teeth and the gums thoroughly, three times a day, after the intelligent labors of a dentist have preceded In the majority of cases of syphilis of the nervous system, tabes and paresis subsequent administration of mercury or salvarsan is a matter of indifference and convenience In some cases experience shows that mercury accomplishes more than salvarsan, and vice versa Again, experience shows that some cases do best by alternating one and then the other As regards tabes dorsalis and paresis, a number of cases are incorrectly diagnosed as cerebrospinal syphilis or paresis The Lange gold test is not infallible for paresis

Dr Abner Post Boston Much trouble comes from the classification of syphilis as a venereal disease When we think of the accidental inoculations, of conjugal syphilis, of hereditary syphilis, and syphilis communicated in some other way, it is unfair to classify all syphilitics under the term "venereal" We ought to consider syphilis as a communicable disease and have it so recognized in hospitals and in reports of vital statistics

Dr William G Spiller, Philadelphia I am not a strong advocate of the intraspinal treatment of syphilis because I have had brilliant results in a number of cases by other methods It is possible to get brilliant results in cases of nervous syphilis provided the treatment outlined by Dr Fordyce is begun in the early stage of the disease It is impossible, however to get satisfactory results when destruction of nerve cells and nerve fibers has occurred The most that can be hoped for in such cases is an arrest of the pathologic process As to laboratory findings these are sometimes positive in the cerebrospinal fluid when there are no symptoms of syphilis of the nervous system These cases should be regarded as suspicious There are many cases which are probably late manifestations of syphilis in which the findings are negative

Dr George Walker, Baltimore In a recent examination of 1,080 patients, regardless of the diseases for which they sought treatment, 10 8 gave a positive Wassermann reaction In an examination of 327 prostitutes, 67 per cent gave a positive Wassermann reaction Of 480 inmates of an institution for the feebleminded, boys and girls, representing state charges, less than 3 per cent showed positive Wassermann reactions In an examination of sixty of the lowest grade of imbeciles there was only one that showed a positive Wassermann reaction

IMMUNIZATION AND ITS PRACTICAL APPLICATIONS

The Underlying Problems of Immunization

Dr Theobald Smith, Princeton The underlying principles of immunization are twofold 1 To prevent or to check disease by applying the methods copied from nature and improving on them in the interest of man, if possible 2 To discover the modus operandi of resistance to disease, the sequence of events which is associated with recovery on the one hand and with complete resistance on the other The object of immunization is to raise the resistance of the body The remarkable effectiveness of smallpox vaccination has left the impression that immunization toward any disease always means complete protection from that disease We miss here the quantitative concept which is involved in all life processes We must accept the fact that no kind of vaccination is invariably and completely protective We may, however, hope to convert a fatal into a nonfatal attack, a mild attack into one so mild as to remain unrecognized or into complete protection As long as the susceptibility of individuals varies toward the same infecting agent, we cannot expect the same treatment to bring all to the same level of resistance Nor is it possible with the same treatment to protect equally well against agents of high and low virulence To neglect the quantitative side of immunization is to bring the process into discredit because our claims cannot be justified One of the problems bearing on this phase of the subject is a better study of spontaneous mild disease as a result of exposure in the vaccinated individual and of attacks which may not be recognized by older clinical methods, and which even the patients themselves may overlook Our present conception of acquired immunity assumes that, after every exposure, there is some however slight, multiplication of the virus necessary to wake up the immunizing mechanism

The essential factor to be kept in mind is to raise such resistance with the least injury to the subject The direction which immunization is to take depends on the etiologic factors involved There are primary and secondary infectious agents in most diseases It is generally conceded that if we protect against the primary agent, the others are thereby kept suppressed The assumption underlying this view is that the secondary agents play no part in giving the primary agent an opportunity to infect, but that the reverse is true This, however, has not been proved When it comes to an actual outbreak of such a possible change of diseases, the situation is changed, the main or primary disease will run its course satisfactorily if the complications can be kept away The question, then, at issue becomes a choice of vaccine toward possible secondary invaders The general rule that a single attack of a disease protects for life is subject to many limitations All acquired immunity is a perishable commodity This question is complicated by several factors, among which are the following (*a*) The human body becomes more resistant to infection with age (*b*) There is a possibility of reinfection without clinical signs which will maintain and strengthen any immunity obtained in infancy and childhood

There is a clearly marked distinction between groups of micro-organisms as to the capacity of the host to be immunized experimentally With some the attempt is much more readily successful than with others Those bacteria which act only through their toxins are most easily kept in check by immunization Bacteria producing diseases of longer duration appear difficult to suppress in proportion to the chronicity of the affection To these general rules there are exceptions Endemic disease leads to relatively heightened resistance Since most of the diseases in question are due to parasites which survive and may persist in the blood during a lifetime, which, in other words, are able to subsist in an immune host, the most rational explanation is that based on the transmission of immune bodies to the offspring

Among the established facts in immunology is the greater efficacy of living virus over any other, the practical application of this fact, however, encounters many obstacles. There are the degree of permanency of the attenuation, and besides the attenuation of homologous viruses, the finding of naturally attenuated strains The preconception that strains of low virulence cannot immunize toward highly virulent strains should not stand in the way of actual trials Next to living virus, the bodies of bacteria killed by heat seem to have the best chance of producing immunity The success or failure of this method will depend theoretically on what is the important antigen If the aggressive activity or virulence of micro-organisms is rapidly lost after isolation from the tissues, the effectiveness of cultures killed by heat, or otherwise, will naturally depend on the total age of the cultures used, provided the factor of virulence is not completely destroyed when the bacteria are killed The evident success of this method in preventing an attack of typhoid fever is encouraging for this method of vaccination The relative efficiency of sensitized vaccines probably depends on a quantitative relationship between the antiserum and the bacilli For diphtheria toxin and antitoxin this can be controlled definitely It is difficult to see just how a similar accurate titration of immune serum and bacteria can be made in terms of any assignable units at present The only way open is to inject series of mixtures of variously sensitized bacteria and await results The explanation for the very effective immunizing power of sensitized toxins depends on the greater penetrating power of such mixtures The toxin appears to travel farther in combination with the antitoxin than when free Perhaps the last word in immunizing methods is the use, not of living or dead virus, but of distinctive parts thereof Theoretically, the attempt to find the chief antigen of a micro-organism and exclude all others as either unimportant or harmful is just as justifiable as the attempt to immunize the body toward the chief or primary infection, letting the secondary infection alone Of a series of antigens there may be one which represents the primary and, therefore, the most important aggressive or protective agency of the virus and which, if introduced in abundance, might produce that degree of resistance which later will interfere with the beginning of the infective process

The recent developments in immunologic research indicate that medical science is moving away from the doctrine that the toxins or poisons of bacteria are the chief substances against which immunization is to be directed That they are responsible for most of the injury inflicted must be granted, but the injury may be a side issue not in line with the main events The object of immunization is to suppress the invader, the problem underlying is to find the precise aggressive weapons which permit the invader to multiply The capacity of micro-organisms to enter and multiply in the tissues of the host may or may not be due to the direct action of the toxins If not, it would be useless to immunize them However, when we come to treat disease in actual progress, the neutralization of toxins may be a very important step

Serum Therapy

Dr William H Park, New York The advisability of using serums in any particular disease is influenced by a number of considerations The primary one is whether a serum is available which contains antibodies of suitable kind and amount to neutralize the toxins or aid the body cells or ferments in destroying the micro-organisms, others, whether the infection can be identified from clinical signs alone, or only after additional laboratory examinations, and whether the serums can be brought into contact with the toxin or organisms at the essential points in the necessary concentration and within the required time Dr Rufus I Cole believes that 75 per cent of all lobar pneumonia cases are caused by pneumococci of three strains which he has called Types 1, 2, and 3, and that the remaining 25 per cent are caused by a multitude of strains so numerous that in a moderate number of cases no repetition of the same type is likely to be encountered About 30 per cent. of the cases of pneumonia and about one third of the total deaths are caused by infections with Type 1 The results of serum injection seem favorable in Type 1, doubtful in Type 2, and absolutely negative in Types 3 and 4 The mortality up to the present time has been much less in the treated than in the untreated cases Serum sickness occurred in about 50 per cent of the cases, and while very annoying was not dangerous The serum should be standardized so that 0.2 c c of a recent serum will protect 100,000 fatal doses of a very virulent type of pneumococcus, and no serum should be put out that contains less than half that strength Cole advises 80 c c of serum diluted with 80 c c of salt solution injected intravenously, and repeated about every twelve hours until permanent improvement is noted Usually he gives from three to five doses He recommends that the serum be given only after the bacteriologic test has shown the type, while I believe that in a severe case a first dose of Type 1 serum should be given as soon as possible and the later injections only after a bacteriologic report

The treatment should be considered from two points, one the good of the patient, the other the advance of knowledge The severe cases that receive an injection of Type 1 serum are considered only from the first standpoint With the antistreptococcic serums the same reasoning applies as with the pneumococcic serums and the same dosage and method of administration If it is suspected that the infection is with the hemolytic type, we can rightly give this type of serum with the hope of some good results If we suspect the *Streptococcus viridans* type, a polyvalent serum of this type might be given with slightly less prospect of help Before giving further injections the organisms should be identified

In epidemic meningitis the spinal fluid in every case should be examined microscopically, for only in this way can a correct diagnosis be made Here, too, the strains differ, they have group relationships, and intravenous injection of suitably selected strains causes the horse to produce a serum capable of almost all strains The reports from England of failure to get good results under the serum treatment of meningitis may be explained by the great demand for the serum which leads to the attempt to replenish the stock of serum and which in turn leads to a too frequent bleeding of the horses, resulting in a serum which is found later to be poor in antibody content

I should like to refer to the favorable results obtained in the treatment of early toxic cases of scarlet fever with convalescent serum, or whole convalescent blood, by saying that from 100 to 300 c.c of fresh whole blood injected intramuscularly can also be used in acute and chronic exhausting diseases in which the nutritive and bactericidal value of homologous protein is distinctly indicated

As to the Schick reaction and dosage of antitoxin in diphtheria a single large dose of antitoxin has been shown to be more effective than a larger amount of antitoxin administered in several successive doses Were it not for the disadvantages inherent in the intravenous method, it would be the method of choice In patients who have been sick for from twenty-four to seventy-two hours and show a great extent of disease and symptoms of toxic absorption, from 3 000 to 10,000 units of antitoxin intravenously is imperative On the other hand, the mild or moderate cases may be treated by a subcutaneous or, better intramuscular injection

As to the methods of administering tetanus antitoxin experiments demonstrate conclusively the superiority of the intraspinal method

Dr. Ludvig Hektoen, Chicago, delivered an address on 'Vaccine Therapy," which was published in The Journal, May 20, 1916 p 1591

Discussion on Immunization and Its Practical Applications

Dr. Frank Billings, Chicago In chronic affections, both local and acute, more particularly the infectious arthritides, and in cases of furunculosis, alveolar abscesses, sinusitis pyelitis cystitis, etc we have attempted to carry out treatment by autogenous vaccines We tried to make our autogenous vaccines by the injection into animals of strains obtained from the tissues of man Furthermore we immunized the horse with polyvalent strains of the so-called *Streptococcus viridans* We had that serum standardized We used serum to sensitize vaccines of the type we are using We used serum in connection with the vaccines to attempt to arouse the defenses of the individual We have kept records of all of that work We have treated over 500 cases of chronic infectious arthritis, a number of cases of infectious endocarditis with *Streptococcus viridans,* a number of patients suffering from pyelitis, colon bacillus infection, and other infections While this work was going on, especially with the arthritides, I have attempted to see what could be done with the same class of patients without vaccines

Before we knew much of bacteriology or vaccine or serum treatment we recognized that certain individuals were more susceptible to disease than others because of exposure to cold to extreme fatigue, to any kind of mental or physical strain to poor general nutrition, and to many other causes Age in such cases plays an important part, and especially as to the resistance of the tissues and the possibility of tissue regeneration when once infected Alongside with vaccination we have attempted to find out conditions of that kind in patients and have sought by hygienic and other measures of treatment to remove them, and I find, so far as I can determine, that patients who had no vaccines with these general processes had their defenses aroused quite as quickly and fully as those who received vaccines If one did not pay attention to general hygiene and to the building up of these patients, the vaccines of themselves did not bring forth a response The use of autogenous vaccines in chronic processes, both local and general, is so limited that their employment has not justified the expenditure of labor and the price necessary to carry on the work That is a general statement, subject to modification that in certain instances, under certain conditions, and in certain individuals the use of vaccines seems to be of benefit, but take them as a class in general disease, I have yet to see the benefit of them

Vaccination, as practiced all over the country by the use of commercial vaccines, is a disgrace to the medical profession The fault is not to be laid at the doors of the people who manufacture these things, they would not continue to manufacture them if the doctors did not use them, and that is not the worst of it Not only do they manufacture them and put them up in polyvalent forms and advise them to be used in this and that way, but these firms make the diagnoses for the doctors and tell them when and how to use them The great trouble is that the average doctor is unthinking and unscientific enough to use a method of treatment which costs him but little thought, and he is so thoughtless that he disregards the results on his patients

Dr. Rufus I Cole, New York So far as producing immunity of any kind in an acute infection is concerned, we must keep in mind that the only evidence we have justifying vaccine treatment is the results which have been obtained by the experiments of Dr Gay and Dr Jobling From a study of the literature and from many experiments, it seems to me that there is very little justification for the use of vaccination in acute lobar pneumonia I have tried to produce active immunity in animals within a few days by various methods, but we cannot bring about that grade of immunity which one would expect to do any good within six or seven days In regard to serum therapy, here again we must be sure we have the same experimental justification for going ahead with any method of serum therapy The facts on which we can hope to justify any method of treatment are simply two 1 We cannot render animals immune or render them resistant to infection with the pneumococcus by treatment with living or dead organisms 2 By transferring the serum of the animals to the normal animal we can render the animal resistant, and, finally, we can, by transferring this blood to the animal which has already been infected, cure that animal, provided the dose of infection of the organisms is not too great, or that we have not delayed too long after infection In pneumonia I feel convinced that the use of serum in Type 1 infection, referred to by Dr Park, is efficacious That statement, however is based on a comparatively small experience When one considers the great frequency of pneumonia, with 6,000 deaths in New York City annually, 2,000 of that number being Type 1 infection, and Type 1 infection causing more deaths than typhoid fever, scarlet fever and all forms of meningitis combined, it seems quite important that serum therapy be given independent consideration

Dr Thomas W Hastings, New York For years specific therapy, particularly in the form of vaccine therapy, has been abused, mainly because care has not been taken to determine the specific factor involved This is just as important in using serums as in employing vaccines Discredit has been brought on the use of them because frequently specific diagnoses of the factors concerned are not made before serum is employed The day has come when the rank and file of physicians in this country should recognize the fact that it takes specialists to do this work, if it is done at all, and that the commercial use of polyvalent vaccines, without specific diagnoses, should be discontinued

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Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

American Journal of Medical Sciences, Philadelphia

May CLI, No 5, pp 625 780

1 Some Phases of Nephritis Problem (A Review) H A Christian, Boston
2 *Surgical Significance and Operative Treatment of Enlarged and Varicose Veins of Spinal Cord C A Elsberg, New York
3 *Role of Sympathetic System in Diagnosis of Abdominal Diseases J F Binnie, Kansas City, Mo
4 *Endothelial Phagocytes in Pleural Exudate Due to Bacillus Typhosus O H P Pepper, Philadelphia
5 *Prophylactic Use of Tetanus Antitoxin H E Robertson, Minneapolis
6 *Localization of Cerebellar Tumors, Pointing Reaction and Caloric Test E G Grey, Boston
7 *Case of Primary Splenic Hodgkin's Disease R. R Mellon, Ann Arbor, Mich
8 *Results With Cholesterinized Antigens in Nonsyphilitic Serum C W McClure and E S Lott, Iowa City, Iowa
9 Cases of Dilatation Aneurysms of Descending Thoracic Aorta S Neuhof, Lebanon, Ala
10 Direct Blood Transfusion With Kimpton Brown Tubes, Report of Nine Cases F R Barnes and M A Slocum, Philadelphia
11 *Time Relations of Gastric Pains, With Special Reference to Gastric Adhesions J C Friedman, Chicago

2 **Operative Treatment of Varicose Veins of Spinal Cord**—The posterior spinal veins are sometimes considerably enlarged below the level of the spinal compression On account of interference by the pressure of an extramedullary neoplasm with the return venous flow, the veins become much enlarged and engorged with blood for a considerable distance below the level of the tumor When the cord of such a patient has been exposed, Elsberg says, one or both veins appear very large and very prominent, they are often more tortuous than normal In intradural inflammatory processes—meningitis and meningomyelitis—the cord has a pink color due to the fine network of distended arteries and veins in the hyperemic area The appearance is not the same as that below a spinal compression in which distended veins stand out prominently on the creamy-white background of the cord Therefore, Elsberg says, it is important for the operator to recognize and to understand the significance of these distended posterior spinal veins and to differentiate a venous engorgement due to pressure from an ordinary inflammatory hyperemia of the cord More or less localized enlargement or varicosity of one or both posterior spinal veins is a condition which is not very rare, it may be the cause of local spinal symptoms, and complete relief from the symptoms may follow an operative interference Among 130 laminectomies for spinal disease Elsberg has six times found one or several enlarged spinal veins on the posterior surface of the cord All of the patients had the signs and symptoms of a level lesion, and the greatest or only enlargement of the vein was found at the part of the cord which corresponded with the symptoms Two of the patients suffered from severe root pains and large veins were found to accompany the affected spinal roots

Elsberg believes that it is fair to conclude that there was some connection between the enlargement of the vein and the cord symptoms The enlarged veins were excised Of the six patients, two had a spastic paraplegia with sensory level symptoms of long standing, and their condition was unchanged after the operation One patient with a tuberculoma of the cord improved very much, but the improvement was due to the removal of the growth A patient who had suffered from severe root pains confined to the distribution of the left eighth dorsal root, and in whom a much enlarged vein ran with the root, was entirely relieved by the laminectomy and excision of the large vein Two patients were suspected of a spinal tumor, but nothing excepting the localized venous enlargement was found at the operation Both of the patients had well-marked sensory and motor signs, and marked improvement followed the surgical interference One of the patients recovered entirely

3 **Rôle of Sympathetic System in Abdominal Diseases**—The incidence and distribution of pain produced by disease affecting the abdominal organs supplied by the sympathetic nervous system is discussed thoroughly by Binnie "Reflex pain" and "referred pain" are analyzed from the anatomic basis He says, for instance, that the complexity of the nerve connections of the viscera, the perfection attained in the fulfilment of their vegetative or automatic functions, and the rarity of the higher centers being given cognizance of what is going on in the digestive tract, apart from a feeling of well being or satisfaction, excuse if they do not explain the confusion in the differential diagnosis of such distinct anatomic entities as appendicitis, pancreatitis, cholecystitis, gastric and duodenal ulcers "Referred pains" may be simulated closely by other very important pain Inflammation extending from the organ primarily involved may of course come into a region supplied by spinal nerves and thus pain result, such as the lumbar pain experienced in cases of retrocecal appendicitis, or the inflammation may spread to another organ adherent to that primarily involved, and thus a secondary "referred pain" may be noted An example of this latter condition is in cases in which an inflamed appendix becomes adherent to the prostate and gives rise to pain at the point of the penis In appendicitis pain may be experienced on the left side of the abdomen through direct extension of peritonitis or possibly, in the absence of such extension, by allochiria, because (Head and Howell), when from any cause one or other of the cutaneous senses is depressed in a given area stimulation in this region may give sensations which are referred to a symmetrical area on the opposite side of the body Impulses passing up from the ureter to the aortic plexuses may produce a disturbance there, sufficient to cause the transmission of motor impulses through the hypogastric plexus to the rectal sphincters and thus set up a tonic contraction Such tonic contraction is present in the cases in which renal colic is mistaken for obstruction

Binnie points out that originally the gastro-intestinal canal was a straight tube developed in the dorsal region and pushed into the primitive body cavity in such a fashion that it became enveloped with peritoneum but retained its connection with the dorsal structures by means of blood vessels and of nerves which lay between the layers of the primitive mesentery As development proceeded the various organs assumed the positions in which they are found in the normal individual The viscera ultimately normally take up positions which may be remote from the middle line, yet their telephone supply remains the same except for the necessary elongation of the wires Binnie suggests that this may explain why the early pain of most visceral lesions is generally median

4 **Pleural Exudate Caused by Typhoid Bacillus**—Pepper cites the case of a man who had been ill with fever and chills for three weeks He complained of no localizing symptoms, and on questioning admitted the presence of a slight pain in the chest for a day or two The temperature and pulse were elevated Physical examination revealed nothing abnormal other than the signs of a small effusion at the base of the right lung On aspiration a few cubic centimeters of hemor-

rhagic serous fluid were withdrawn, and from the cytology of this a diagnosis of pleurisy due to the typhoid bacillus was ventured This diagnosis was promptly verified by finding that both the blood serum and the effusion gave a positive agglutination test with typhoid bacilli and later by obtaining the *B typhosus* in pure culture from both the blood and the effusion

5 **Prophylactic Use of Tetanus Antitoxin**—It is held by Robertson that in the large majority of cases the subcutaneous injection of twenty units of tetanus antitoxin immediately after the injury will prevent with certainty the occurrence of tetanus The delay of a few hours in making the injection may mean the loss of life Local applications of fluid antitoxin on the wound are efficacious but unnecessarily wasteful and not always practical In cases in which injections cannot readily be made, especially in time of war, the immediate application to the wound of dried antitoxin tampons moistened by clean fluid may be used as a temporary substitute until fluid antitoxin can be injected, but powdered antitoxin on the wound is not, as a rule, dependable Its one useful field is perhaps the prevention of tetanus neonatorum The protection afforded by antitoxin lasts from two to three weeks Hence in cases of protracted suppuration or in cases in which for other reasons secondary surgical interference is contemplated, either second injections of antitoxin should be made or dried antitoxin tampons freshly moistened should be placed on the wound

6 **Localization of Cerebellar Tumors**—Grey's report has to do with the results obtained from using these tests in thirty-one patients with cerebellar or extracerebellar tumor The caloric test has proved to be an important means of differentiating labyrinthine from intracranial disease Together with the pointing reaction, this test has been found of value, furthermore, in localizing circumscribed lesions in the cerebellum In most of the patients having cerebellopontine new growths and in certain of those with tumors of one or the other hemisphere, the reactions were sufficiently characteristic to be of supplementary value in localizing the disease In other patients with intracerebellar or extracerebellar tumor, on the contrary, the results were often ambiguous and afforded no assistance in establishing a diagnosis In fact, in numerous instances the conclusions drawn from these results were at variance with the other physical findings, and, had any great reliance been placed in them, would have led to erroneous results Grey suggests that there are probably a number of factors responsible for the occurrence of atypical reactions in patients with certified cerebellar tumors As the more important he mentions first, the great increase in intracranial pressure due to an internal hydrocephalus which ultimately accompanies new growths in the posterior fossa, and second, the diffuse nature of many of the tumors common to the cerebellum

7 **Primary Splenic Hodgkin's Disease**—Mellon reports what he believes is the first case of the kind on record The entire clinical history covered a period of not over two years, the lymphatic glandular involvement of chest, abdomen and inguinal regions, all showed changes decidedly younger than those in the spleen

8 **Cholesterinized Antigens in Nonsyphilitic Serum.**—Nonspecific reactions were obtained by McClure and Lott with antigens representing additions of 0 0125, 0 0248, 0 0496, 0 0502 and 0 0996 gm of cholesterin to 100 c c of the alcoholic extract of syphilitic livers, also, with an addition of 0 101 gm of cholesterin to 100 c c. of the alcoholic extract of guinea-pig hearts The conclusion is drawn that cholesterin additions in the amounts above employed render the alcoholic extract more sensitive but somewhat less specific, and therefore of questionable value in the diagnosis of syphilis

11 **Time Relations of Gastric Pains**—Gastric discomfort of the intragastric and perigastric regions is divided by Friedman into continuous and intermittent varieties The continuous pains are most frequently due to carcinosis, to marked pyloric obstruction, and to penetrating ulcers, with peritoneal involvement. The intermittent pains may be divided into immediate, early and late The immediate are found frequently in ptosis, neurosis, obstruction of the cardia, besides other conditions, not considered here, as achylia gastrica, etc The early pains including those occurring fifteen to sixty minutes after eating, are most often due to adhesions in any part of the stomach, including ventral hernias and pericholecystitis These are to be thought of particularly in those cases in which the changes in secretion and motility are too slight to account for the distress complained of Late pains include those occurring one to three hours after eating, and indicate an increase in intragastric pressure or pylorospasm, of which the most frequent cause is hyperacidity It is occasionally due to slight pyloric obstruction or pyloric adhesions or reflex causes

American Journal of Roentgenology, New York

April III, No 4 pp 191 242

12 *Roentgen Deep Therapy in Malignant Tumors. A F Holding New York
13 Roentgen Diagnosis of Obscure Lesions of Gastro-Intestinal Tract W H Stewart, New York.
14 Comparative Value of Roentgen Ray and Radium in Therapeutics. W S Newcomet, Philadelphia
15 *Roentgen Studies of Effect of Moderate Doses of Some of Opium Derivatives on Gastro Intestinal Tract of Man H K. Pancoast and A H Hopkins, Philadelphia
16 Use of "Polygram' in Gastroduodenal Roentgenography I Gerber, Providence.

12 Abstracted in The Journal, Nov 6, 1915, p 1669
15 Abstracted in The Journal, Oct 30, 1915, p 1581

Archives of Ophthalmology, New Rochelle, N Y

May XLV No 3 pp 205 305

17 Declinations of Vertical Meridians of Retina., G T Stevens New York.
18 Frozen Carbon Dioxid in Treatment of Trachoma Vernal Catarrh and Pterygium A E Prince, Springfield Ill
19 Localization of Streptococci in Eye. E V L. Brown, E E Irons and W H Nadler, Chicago
20 Anilin Injuries of Eye Report of Case With Deep Ulceration of Lower Lid R J Curdy, Kansas City Mo
21 Optic Neuritis After Influenza, With Changes in Spinal Fluid A. Knapp, New York
22 Two Cases of Metastatic Ophthalmia Consecutive to Pneumonia M Cohen New York
23 Correct Use of Giant Magnet in Operations on Eye. O Haab Zürich
24 Examination of Color Sense With Pigment Colors. R Helmbold, Danzig
25 Description of Exophthalmometer W Lohmann Munich

Archives of Pediatrics, New York

April XXXIII No 4 pp 241 320

26 *Studies in Spinal Fluid (I) Alkalinity of Spinal Fluid (II) Report of Cases. A Levinson, Chicago
27 *Some Important Factors Affecting Incidence of Measles and Fatality Therefrom J G Wilson U S P H S
28 Value of Wassermann Reaction in Mental Deficiency in Children Study of Seventy Eight Cases A. Gordon Philadelphia
29 *Recovery of Colon Bacillus From Spinal Fluid of Five Months' Old Infant M Michael Chicago
30 Short History of Infant Feeding H R Mixsell, New York.

26 **Studies in Alkalinity of Spinal Fluid**—Levinson believes that methyl red is the most sensitive and most suitable indicator for determining the alkalinity of the spinal fluid It is one of very few indicators that is sensitive to organic substances It gives a straw color to water, a strongly yellow color to alkaline and a bright red to acid The change from neutral to acid or alkaline is very sharp and can be used even for the determination of ammonia Levinson used 1 drop of a 2 per cent solution of methyl red in alcohol and adopted sulphuric acid for titration of the spinal fluid and that in one-hundredth normal solution He describes his method in detail The result of his study thus far seems to be that the alkalinity of the spinal fluid varies in different diseases The alkalinity bears a certain relationship to diseases of the meninges Furthermore, some diseases influence the alkalinity in a characteristic manner The determination of the chemical reaction of the fluid thus becomes of value in establishing the diagnosis of some forms of meningitis Fifty cases of spinal fluid were tested for its alkalinity, some of which were nonmeningeal in character, while others were true meningitis In nonmeningeal cases

the alkalinity varied from 1 5 to 2 6 c c Normal alkalinity varying between 2 0 and 2 4 In the meningeal cases the alkalinity was lower Epidemic meningococcus meningitis shows a lessened alkalinity of the spinal fluid Of 8 cases tested none reached to 1 5 c c the highest being 1 3 c c, the lowest 0 7 Pneumococcic meningitis also shows a lessened alkalinity from 0 9 to 1 1 c c, but tuberculous meningitis shows no decrease in alkalinity One case of influenza meningitis gave a 1 45 c c alkalinity The administration of serum had an increasing effect on the alkalinity of the spinal fluid

27 **Factors Affecting Incidence of Measles**—From a study of his own cases and a survey of the literature, Wilson feels that both the incidence and the case mortality rate of measles are subject to extreme variations and that the cause of these variations is not understood He says that cross infection, especially that of diphtheria, is the most serious event that can occur in the course of measles Suppurative otitis media, although the most frequent complication of measles, is not of grave prognostic import when properly treated Bronchopneumonia complicates about 10 per cent of all measles cases, being but little influenced by weather conditions in the frequency of its occurrence or its fatality The fatality of measles complicated by bronchopneumonia is 58 per cent, but this fatality varies in an exceedingly erratic manner and without marked relation to the total case fatality of measles The incidence rate of bronchopneumonia as a complication rather than its case mortality appears to be an index to the severity of any particular outbreak of measles.

29 **Colon Bacillus in Spinal Fluid**—Michael reports this as a case of colon bacillus meningitis of hematogenous origin

Arkansas Medical Society Journal, Little Rock

April, XII, No 11, pp 269 295

31 First Medical Faculty Elected in Arkansas L. P Gibson, Little Rock
32 Mastoiditis J W Ramsey, Jonesboro
33 Tonsillectomy With Local Anesthesia H H Rightor, Helena
34 Importance of Treating Diseases of Accessory Sinuses of Nose L H Lanier, Texarkana

Boston Medical and Surgical Journal

May 11 CLXXIV No 19, pp 667 702

35 *Methods for Testing Donors for Transfusion of Blood and Consideration of Factors Influencing Agglutination and Hemolysis G R Minot, Boston
36 Use of Duodenal Tube for Diagnosis and Treatment (To be concluded) F W White, Boston
37 *Gastric Ulcer Experimentally Produced by Means of Staphylococcus Organism, Preliminary Note E C Steinharter, Cincinnati
38 Fallacies of Group Treatment H J Cronin, Cambridge

35 **Testing Donors for Transfusion of Blood**—The various tests employed to test blood for its power to agglutinate or hemolyze other blood are described by Minot, including his modification of the Rous and Turner test, which he has found may be performed without the need of accurately diluting the blood by white counters, so that the disturbing factor of clotting is done away with Minot places 3 to 4 drops of a 1 5 per cent citrate solution in 0 9 per cent salt solution in a short (about 2 cm) test tube, with a relatively large diameter (about 1 cm), then collect in this tube 9 drops of blood from the recipient and one from the donor, and in another tube similarly collect 9 drops from the patient and one from the recipient The drops of blood are collected from a prick in the ear, trying to allow the blood to fall directly into the citrate, but it makes no difference even if the blood runs down the side of the glass The drops need not be of exactly the same size, and the amount of blood does not need to be accurate, but approximate After the mixtures have been mixed by shaking, and have stood for about fifteen minutes, take out a drop and examine it microscopically for agglutination

37 **Gastric Ulcer Experimentally Produced by Means of Staphylococcus Organism**—The organism used by Steinharter was obtained from a case of septicemia in man At first cultures of it injected intravenously into rabbits were found to produce a septicopyemia, but later, after cultivation in the wall of the living stomach of the rabbit, it showed on intravenous injection an affinity for the intestinal tract, locating most often in the appendix and occasionally in the stomach Typical peptic ulcers varying from one quarter of an inch to 1 inch in diameter were produced by injecting locally into the stomach wall the staphylococcus organism of certain grades of virulence and a weak acetic acid solution The injection of the organism alone usually caused the development of a small localized and firmly walled off abscess at the point of injection Such an abscess, as a rule, was absorbed in the course of four to six days and never showed any involvement of the mucous or peritoneal coats In some cases no abscess was formed The introduction of the acid alone into the stomach wall beyond causing more or less edema provoked no gross pathologic change in the tissues It never caused an ulcer, but it did seem to increase the susceptibility of the area for localization of the staphylococcus injected into the general circulation The tendency of selective localization in certain organs was found to depend among other things on the virulence of the organism and could be modified by cultivation in functionating tissue In the light of these results, it seems to Steinharter that it is possible that the staphylococcus is responsible for certain cases of gastric ulcer in human beings If by some means (through an erosion or trauma, etc), a hyperacid gastric juice enters the tissues of a limited area of the stomach wall and the staphylococcus of proper virulence (for example from the appendix) finds lodgment there, it does seem quite probable that the necessary conditions used in producing the experimental ulcer would be duplicated This point is still under study

Florida Medical Association Journal, Jacksonville

May, II No 11, pp 321 352

39 Plastic Tendon Surgery R C Turck, Jacksonville
40 Direct Transfusion With Bernheim Tubes H M Ginsberg, Pensacola
41 Ovarian Cysts D Forster, Hawkes Park.
42 Influenza A. R Bond, Tampa
43 Imperforate Anus E T Campbell, Starke.
44 Appendicitis J W Hargis, Pensacola

Iowa State Medical Society Journal, Des Moines

April VI, No 4, pp 147 198

45 Some Later Adaptations of Gastro Intestinal Surgery C A L Reed, Cincinnati
46 Surgical Treatment of Old Gonorrheal Infection in Women S A Spilman, Ottumwa
47 Two Cases of Madelung's Disease E C McClure, Bussey
48 Case of Intra Ocular Sarcoma W J Bussey and J W Shuman, Sioux City
49 Effects of Workmen's Compensation Law on Profession D S Fairchild, Clinton
50 Infection, Cause of Local and General Disease C H Mayo, Rochester, Minn
51 Medical Treatment of Gastric Ulcer E D Tompkins, Clarion
52 Series of Brain Cases A M Pond, Dubuque

Journal of Parasitology, Urbana, Ill

March, II No 3 pp 99 148

53 Seasonal Distribution of Some Acanthocephala From Fresh Water Hosts H J Van Cleave, Urbana
54 Intermediate Hosts of Lung Distome, P Westermani Kerbert S Yoshida
55 *Gongylonema in Role of Human Parasite H B Ward Urbana
56 Are Sarcosporidia Aberrant Forms of Cnidosporidia of Invertebrates? B Galli Valerio
57 Three New Gregarines From Marine Crustacea M E Watson, Long Island N Y
58 Pajaroello Tick (Ornithodorus Coriaceus Koch) W B Herms, San Francisco
59 Etiology of Verruga as Deduced From Study of Asexual Stages of Bartonella C H T Townsend Washington, D C
60 New Infusorian Parasite in Sand Fleas M E Watson, Long Island, N Y

55 **Gongylonema Human Parasite**—A specimen of *Gongylonema*, probably *G pulchrum*, according to Ward, has been recovered from man This species is normally a parasite of the pig Infection of the human host in Ward's opinion was brought about probably by the ingestion of larvae in the infective stage which had developed in some insect Very likely the croton bug, known by experiment to be able to serve as intermediate host for this species, was the source of the infection which might readily occur by accident The presence of the parasite was accompanied by clinical symp-

toms indicating marked digestive and nervous disturbances, associated with anemia These symptoms disappeared with the removal of the worm The parasite displayed a tendency to wander through the submucosal connective tissue from the lips to the throat

Journal-Lancet, Minneapolis

May 1 XXXVI No 9 pp 247 278

61 Clinical Observations and Deductions of Some Obscure Infections A E J Sohmer Mankato
62 Recent Advances in Therapy of Syphilis J Butler, Minneapolis
63 Some Common Errors in Infant Feeding G E Zimmerman, Sioux Falls S D
64 Open Air School Movement. P L. Benjamin, Minneapolis

Kansas Medical Society Journal, Topeka

April XVI No 4 pp 97 130

65 Future Prospects of Medical Education in Kansas E T Hackney
66 Medical Teaching and Its Future F Strong, Rosedale
67 Plans for Future Development of Buildings and Equipment of School of Medicine University of Kansas. M T Sudler, Rosedale
68 Small College and Medical School J Sundwall Rosedale.
69 Work at University Medical School and Hospital at Rosedale R H Major, Rosedale.
70 What Is Medical Education? S A Matthews, Rosedale
71 Relations of Medical School to Profession of State M T Sudler, Rosedale
72 Premedical Entrance Requirements F B Dains Rosedale
73 Summer School for Physicians and Health Officers. S J Crumbine, Rosedale.

Medical Record, New York

May 6 LXXXIX No 19 pp 807 852

74 *Treatment of Pyorrhea Alveolaris and Its Secondary Systemic Infections by Deep Muscular Injections of Mercury B L Wright, U S Navy
75 Nurse in Peace and in War J L Corning New York.
76 References to Anatomy in Rabelais Works. D W Montgomery, San Francisco
77 Dementia Praecox Studies. B Holmes and J Retinger, Chicago
78 Causation and Treatment of Pellagra H E. Bond, Kingston, Jamaica
79 Climate in Treatment of Pulmonary Tuberculosis W S Mills, New York.
80 Urinary Test for Syphilis and Its Comparison With Wassermann Reaction. C D Gray Portland Me.
81 Intravenous Administration of Mercury in Syphilis T Shaw San Antonio Tex.
82 Report of Fatal Case of Angina Pectoris. J J Gingles Seattle

May 13 No 20 pp 853-894

83 Chronic Trigonitis H W E Walther New Orleans
84 Role of Wish in Manifestations of Epileptic Type of Nervous Constitution R G MacRobert, New York.
85 What Life Insurance Companies Can Do to Assist in Control of Cancer H W Cook Minneapolis
86 Radium and Symptomatic Blood Pressure D C Moriarta Saratoga Springs
87 Dividing Line Between Medical Charity and Medical Business E A Codman Boston
88 Practicability of Ratings in Appointment and Promotion of Members of Visiting Staff R L Dickinson Brooklyn
89 What Is Meant by Hospital Efficiency and Some of Factors Which Are Often Responsible for Lack of Efficiency W H Smith Baltimore
90 Etiology of Recent Epidemic of Pseudo Influenza W W Williams and W Burdick, Denver

74 **Pyorrhea Alveolaris Treated by Muscular Injections of Mercury**—Wright is convinced that mercury properly administered is a cure for the various infections produced by the vegetable parasites among which pyorrhea, as a primary focus of infection, is of the utmost importance

New Jersey Medical Society Journal, Orange

May XIII No 5 pp 209 258

91 Diabetes. W W Beveridge Asbury Park
92 Starvation Treatment in Diabetes F J McLoughlin Jersey City
93 Epidermolysis Bullosa Hereditaria Report of Case E D Newman Newark
94 Physician s Idea of Preparedness. P A Potter East Orange.
95 Case of Gastric Hemorrhage With Transfusion and Recovery E A Ill Newark
96 Diaphragmatic Hernia E. Field Red Bank.

New Orleans Medical and Surgical Journal

May LXVIII No 11 pp 695 764

97 Early History of Malaria C Wesselhoeft Boston
98 Discovery of Cinchona Bark C Wesselhoeft Boston
99 Introduction and Early Use of Cinchona Bark C Wesselhoeft, Boston
100 Arsenobenzol J P Lobenhoffer New Orleans
101 General Status of Immunity From Laboratory and Clinical Standpoint A M Rovin, Detroit
102 Pituitary Extract H R Cogburn, Bayou La Batre, Ala
103 Two Cases of Bone Grafts J T Nix, Jr New Orleans

Oklahoma State Medical Association Journal, Muskogee

May IX No 5 pp 107 135

104 Vesical Calculus. W E Dicken, Oklahoma City
105 Intestinal Obstruction F J Wilkiemeyer, Muskogee
106 Pneumonia in Country J C Watkins, Checotah
107 Vesiculitis and Belfield Vasotomy and Vasostomy B W Randel Muskogee
108 Treatment of Burns With Bicarbonate of Soda C von Wedel Oklahoma City
109 Hydrotherapeutics in General Practice. C W Jamison Alva
110 Prostatectomy Report of Two Cases F L Watson McAlester

Surgery, Gynecology and Obstetrics, Chicago

May XXII No 5 pp 507 634

111 Report of Unusual Fecal and Genito Urinary Cases Treated With Bismuth Paste E G Beck, Chicago
112 Shockless Surgery With Aid of Paravertebral Anesthesia and Scopolamin and Narcophin B Kroenig and P W Siegel Freiburg Germany
113 *Final Results in Twelve Cases of Colectomy J G Clark Philadelphia
114 Surgery of Infants and Small Children C G Buford Chicago
115 Pathologic Findings in Retro-Inguinal Hernias R Finochietto, Buenos Aires Argentine
116 Treatment of Chronic Nontuberculous Empyema S Robinson Rochester, Minn
117 *Effect of Foreign Substances in Peritoneal Cavity W R. Cubbins and J A Abt Chicago
118 Psychiatry and Gynecology F M Barnes Jr, St. Louis
119 Hernias of Urinary Bladder A P Heineck Chicago
120 *Value of Sodium Citrate Solution in Prevention of Peritoneal Adhesions D C Straus Chicago
121 *Heterogeneous Intramedullary Bone Peg Its Possibilities and Limitations G de Tarnowsky, Chicago
122 Technic of New Procedure for Subtotal Abdominal Hysterectomy in Uterine Fibroma or Inflammation of Adnexa C Carvallo, Lima Peru
123 Improved Towel Clip F E Locy, Evanston
124 *Case of Dystocia Due to Ascites in Fetus With Persistent Cloaca Report of Case. K. M Lynch and A. J Jervey Charleston S C
125 Internal Sphincter After Prostatectomy G S Gordon Vancouver, B C

113 **Final Results of Colectomy**—In only six of the twelve cases operated on by Clark was the result entirely satisfactory In all cases there has been great improvement in the constipation for a time, to be followed at variable intervals in four by a gradual recurrence of the constipation In some cases this has not been so severe as formerly, whereas in others it is quite as intense Roentgen ray examinations in three cases showed in two decided dilatation of the ileum to a size closely resembling that of the colon In none of these cases has there been diarrhea of long standing, and none that was not controlled by simple medicinal measures In none of the cases has there been undue thirst In six cases there has been marked improvement in nutrition In the remainder there was no visible effects so far as physical improvement is concerned Clark feels that total removal of the colon is justifiable only in severe cases of obstructive constipation and that a less radical procedure must be employed He inclines to the limitation of the colectomy to the ascending and the middle of the transverse colon, with a lateral anastomosis of the ileum into the transverse colon In this way the omentum is preserved and there is far less traumatism to the mesentery, with its very important sympathetic nervous system The ileum will not uniformly assume the vicarious function of the colon and the backward pressure from the colon through the anastomotic opening, when it is low down, in a definite proportion of cases causes dilatation and permanent impairment of the ileum

117 **Effect of Foreign Substances in Peritoneal Cavity**—Cubbins and Abt claim that iodin is an intense irritant to the peritoneum and favors rather than inhibits bacterial action It will produce firm fibrous adhesions, either with or without any manipulation of the peritoneum Nor can they see the value of the use of ether in the peritoneal cavity and it is their opinion that individuals in whom it is used will recover

in spite of it and not because of it Petrolatum they found is an intense irritant to the normal peritoneum of a dog, and is absorbed very slowly, if at all They have had two cases of petrolatum in the peritoneal cavity of humans, in which it was necessary to open the belly and allow the petrolatum to escape practically in the same condition as it was when it had been put in three and four months before The walling off of the petrolatum in the belly of these two humans was just as firm as if it had been around an abscess Paraffin oil, too, is relatively nonabsorbable, and will not prevent adhesions, although it is far less irritating to the peritoneum than petrolatum Olive oil has little, if any, value in preventing adhesions, although it has little or no irritating effect on the peritoneum

120 **Sodium Citrate in Prevention of Peritoneal Adhesions** —Sodium citrate solution Straus found is of no value at all in preventing the reformation of adhesions which have been separated It is of little value, if of any at all, in preventing the primary formation of adhesions, and may interfere somewhat with wound healing

121 **Heterogeneous Intramedullary Bone Peg**—De Tarnowsky reports six intramedullary soup-bone peg cases in which he obtained good results Any of the long bones of a steer will answer the purpose For repair of a femur, the splint should be 4 inches long for transverse fractures, 5 or even 6 inches for very spiral or comminuted fractures, and approximately one-half inch in diameter, for the tibia or humerus 4 inches long and one-third to one-fourth inch in diameter *The splint is denuded of its periosteum, cut to the* proper size and boiled two consecutive days for two hours and one hour just before the operation At the time of the operation, it has been the author's custom to fit the peg to the medullary canal and not to drill the canal to fit the peg

124 **Dystocia Due to Ascites in Fetus**—This was a case of monochorial twins, one a well-developed female, the other, also a female, with failure of development of the pelvic viscera beyond a certain point and a marked edema Lynch and Jervey believe that the underlying factor in the maldevelopment and the edema was one of poor circulation with impoverished blood by reason of the stronger sister usurping the cream of the nutrition from the common supply or even bringing about a relative stagnation of the circulation in the weaker by reason of its superior power

Texas State Journal of Medicine, Fort Worth

May, XII, No 1, pp 1 54

126 Family Physician in Memoriam F J Mayer, Opelousas, La
127 Modern Country Physician J E Dildy, Lampasas
128 Plea for Cleanliness in Obstetrics C R Johnson, Gainesville
129 Pituitary Extract R A Duncan, Graham
130 Important Points in Bone Transplantation W L Brown and C P Brown, *El Paso*
131 Regeneration of Long Bones Following Infection S P Cunningham, San *Antonio*
132 Relative Value of Tests for Occult Blood T C Terrell, Fort *Worth*
133 Splenic Anemia, Report of Case O N Mayo, Belton
134 Common Errors in *Practice* of Medicine K H Beall, Fort Worth
135 After Treatment in Submucous Resection of Nasal Septum S N Key, Austin
136 Turbinectomy and Its Results W G Hartt, Marshall
137 Nasal Affection in Relation to General Medicine D L Bettison, Dallas
138 Gunshot Injuries of Eyeball J O McReynolds, Dallas
139 Results That May Be Expected *in* Operations for Strabismus R B Sellers, Fort Worth
140 Subconjunctival Injections R H T Mann, Texarkana
141 Dionin Subconjunctivally E H Cary, Dallas
142 Subconjunctival Injections in Plastic Iritis J L Burgess, Waco
143 Few Facts Concerning Eye, Worth Knowing By All Physicians L H Lanier, Texarkana

West Virginia Medical Journal, Huntington

May, X, No 11, pp 363 398

144 Tuberculosis of Bladder and Kidneys T E Vass, Bluefield
145 Local Appl*ications in* Treatment of Pulmonary Conditions J A Graham, Fairmont
146 Treatment of Pulmonary Tuberculosis E E Watson, Salem, Va
147 Laboratory and Clinical Diagnosis M L *Heidingsfeld,* Cincinnati
148 Value of Canadian "6[illegible]6" (Diarsenol) W S *Robertson,* Charleston

FOREIGN

Titles marked with an asterisk (*) are abstracted below Single case reports and trials of new drugs are usually omitted

Archives of Radiology and Electrotherapy, London

April, XX, No 11, pp 357 392

1 New Roentgen Method of Bullet Extraction A E Barclay
2 Roentgen Ray in Tuberculosis of Bones and Joints (To be continued) R W A Salmond
3 Light from Simpson Arc Lamp Its Nature and Therapeutic Properties A MacGregor

British Medical Journal, London

April 22, I, No 2886, pp 577 608

4 *Treatment of Gunshot Wounds of Spine, Report of Case. A. J Hull
5 Toxic Effects of Ethylhydrocuprein on Eye G H Oliver
6 Notes From Battle Front in Northern France A L Smith
7 *Fecal and Intestinal Vomiting and Jejunostomy V Bonney
8 Case of Marked Temporary Aphasia After Ligature of Common Carotid Artery for Traumatic Aneurysm F C Madden
9 Fatal Case of Acute Nephritis Occurring in Expeditionary Force R C Clarke
10 Injury to Internal Ear Presenting Some Unusual Features H L. Whale
11 *Treatment of Diabetes J Hume
12 New Forms of Plating Dishes for Cultivation of Bacteria S Delepine

4 **Treatment of Gunshot Wounds of Spine**—The position taken by Hull is that the majority of cases of gunshot injury to the spine require excision of the wound and exploration at the earliest favorable opportunity The diagnosis is not so gloomy as past experience teaches Local anesthesia is practically essential The administration of hexamethylenamin should be begun as soon after the injury as possible The presence of a missile together with severe pain are indications for immediate operation Accurate localization of foreign bodies is of the utmost moment A lateral as well as an anteroposterior view is desirable

7 **Fecal and Intestinal Vomiting and Jejunostomy.**—In all cases of paralytic intestinal obstruction (whether primary, or secondary to an organic obstruction or to peritonitis), when advanced to the stage of fecal, or short of fecal, intestinal vomiting, jejunostomy should be done says Bonney In all cases of obstruction, the stomach and jejunum will eventually be included in the fluid containing segment, and as soon as this occurs the fact is made patent by the change in the character of the vomit, which at first becomes intestinal and finally fecal This upward extension of the limits of the fluid containing segment is due to a rapid upwardly extending infection of the canal by organisms of the lower intestine This conversion by bacterial agency of the normal contents of the small intestine into a highly toxic fluid Bonney claims is the essential factor in the production of the symptoms of acute intestinal obstruction The presence of the toxic substances in the bowel excites the mucosa to exude a copious watery secretion which, mingling with the infected fluid already *there, itself undergoes* corruption Thus the upper intestinal tract becomes converted into a great toxic reservoir The death of the patient is due to the absorption of this toxic material, and the vomiting is Nature's desperate attempt to rid the organism of the poison It is here that surgery should step in and drain the reservoir and the drainage opening must tap the fluid containing segment

11 **Treatment of Diabetes**—For several years Hume has treated his diabetic patients by fasting, and cleansing of the alimentary tract, at the same time allowing a diet from which starch was not entirely excluded The fast is generally of about fourteen hours' duration The best time to commence is in the evening by a light meal about 5 p m and is followed in two hours by a dose of castor oil At 9 the next morning a second dose of castor oil is given and then no food for two hours By 11 a m the bowels have, as a rule, acted, and the patient receives breakfast There is, therefore, a period of absolute fasting between the two medicines In succeeding fasts salines are used, the object being to secure a thorough evacuation and to reduce the intestinal flora so far as possible. The patient can easily go through the same routine every second night, and after he has become accustomed to the treatment the duration of the fasts should be prolonged

by beginning earlier in the afternoon and extending them next day At the end of a fortnight a fast of twenty-four hours can easily be done two or three times a week If a small quantity of sugar persists Hume recommends two fasts each week of about fourteen hours, and finds this quite sufficient to prevent the other symptoms of the disease from manifesting themselves and to allow the patient to attend to his duties

Journal of Tropical Medicine and Hygiene, London

April 15 XIX No 8 pp 89 100

13 Case of Vaginitis Probably Due to Monilia Pinoyi Cast 1910 A Castellani
14 Prevention of Conception Among Natives of Kasai Basin, Central Africa W E Masters
15 Madura Foot in Trinidad R Scheult
16 Beriberi Early Diagnosed and Readily Curtailed A P Draper

Lancet, London

April 22 I No 4834 pp 849 894

17 Infantile Mortality and Relative Practical Value of Measures Directed to Its Prevention S G Moore
18 Shock and Soldier G E Smith
19 Preparation and Use of Certain Agglutinating Serums H Chick
20 Intramine (Diorthoaminothiobenzene) New Antisyphilitic Remedy Report of Cases H Spence
21 *Results of Treatment of Chronic Joint Diseases by Certain Physical Measures. J J Grace
22 Case of Heart Block Showing Large Auricular Waves in Femoral Tracing A W Falconer
23 Latent Gas Bacillus Infection in Healed Bullet Wound D P Penhallow
24 Case of Intussusception of Vermiform Appendix W A Curry and E H Shaw
25 Case of Tetanus Like Spasm Localized to Wounded Limb G T Mullally
26 Work of Royal Free Hospital Unit in Serbia J Berry

21 **Treatment of Chronic Joint Diseases**—Grace has treated twenty-four cases of chronic joint disease by radiant heat and static electricity, with in a few cases electrothermic penetration (diathermy) also Among these were 2 ankle-joints, 11 knees, 7 hips, 1 phalangeal joints of hand, 1 elbow and 2 shoulders The ankles did fairly well, knees very well, hips uniformly badly, elbow-joints and finger-joints badly, and shoulders fairly well These results are obtained with a high candle power lamp giving at least 500 candle power from a single filament Grace uses 3 000 candle power and thinks it is better than the lower candle power lamp The static machine used should be capable of giving at least an 18 inch spark between prime conductors with one side grounded With suitable electrodes and a sufficient interval between contraction, very powerful and penetrating currents are tolerated In treating the knee, for instance, an 18 inch spark gap is borne with ease

Sei-I-Kwai Medical Journal, Tokyo

April XXXV No 4 pp 17 22

27 Tubercular Peritonitis and Its Surgical Treatment Y Takaki

Bulletin de l'Académie de Médecine, Paris

April 11 LXXV No 15 pp 397-424

28 Cortical Hemiplegia Recovery After Bilateral Trephining (Syndrome de Weber d origine corticale. Trépanation bilaterale Guérison) P Peugniez.
29 *Test for Functional Capacity of Vestibular Labyrinth (Nouveau mode d examen du labyrinthe vestibulaire.) E J Moure
30 *Carrel s Method for Abortive Treatment of Infection in Wounds. (Resultats obtenus par l emploi de la méthode Carrel en chirurgie de guerre.) M Perret
31 Nervous Affections Consecutive to War Wounds of the Head (Au sujet des sequelles nerveuses des traumatismes cranio-cérebraux de la guerre d après une statistique de 256 cas.) M Villaret

29 **Test of Functioning of Vestibular Labyrinth**—Moure relates that, in addition to the usual tests, including induced nystagmus, he has found very useful a test based on a children s game The individual with eyes shut turns five or six times around a stick or cane which he touches with his head Then he opens his eyes and tries to walk straight forward The normal are unable to do this, always being propelled in the direction in which they have just been turning, and sometimes falling in this direction But when the labyrinth is more or less impaired, there is none of this propulsion, and the individual can walk off straight or nearly straight as soon as he stops turning and opens his eyes

30 **Carrel's Abortive Treatment of Infection**—Perret emphasizes that the success of Carrel's method depends on whether the wounded get the proper treatment within six hours Also that the wounds must be completely cleared out from all foreign matters before beginning the continuous irrigation with Dakin's hypochlorite solution He has applied the method in 111 cases of very severe wounds, including bones in 33 of the cases All the men recovered and amputation was not required in any case In short, he declares, with this method we are masters of infection of wounds Among the illustrative cases described is that of a man whose patella had been reduced to a pulp (*réduite en bouillie*) by a shell wound, the lateral ligaments alone not being completely severed The wound was cleared of bone and metal splinters and scraps of clothing, and Dakin irrigation kept up continuously The temperature did not go above 38 C. except on the day the drain was removed and the day the man got up There was no reaction in the joint at any time It was exercised from the twenty-second day on, he was allowed to get up after thirty-one days, and was discharged the fifty-fourth day after the wound, his gait, without support, absolutely normal

Journal de Médecine de Bordeaux

April LXXXVII No 6 pp 101 120

32 War Wounds of the Ears (Les blessures des oreilles en temps de guerre) G Canuyt
33 Severe Poisoning and Asphyxia in Eight Men Traveling in Closed Army Automobile for Over three Hours (Sur un cas d asphyxie multiple et compliquee observé sur le front.) A Teynac.

Lyon Chirurgical, Lyons

January February XIII No 1 pp 1 212

34 *Advantages of Metal Plates to Aid in Fixation of Fragments After* Fractures in War (De la fixation métallique des fragments osseux dans les fractures compliquées infectees, consécutives aux blessures de guerre) E Villard
35 *Technic for Access to Urethra at Junction With Bladder (Désinsertion ischio-pubienne totale de l'aponévrose périnéale moyenne, pour mobiliser l urètre profond et extérioriser la region prostato vésicale) Rochet
36 *Biologic Study of War Wounds (Les premiers stades de l'evolution des lésions dans les blessures par éclats d obus) A Policard and A Phélip (Recherches sur la suture secondaire des plaies de guerre.) A Policard and B Desplas (De l asepsie pure et des moyens physiques dans le traitement des plaies de guerre à leurs différents stades Chimiotherapie ou physiothérapie?) R Leriche
37 Wounds of the Knee in War (Traitement des plaies pénétrantes de l articulation du genou dans une ambulance chirurgicale de l avant.) G Gayet (Idem) P Santy (Traitement des plaies articulaires du genou dans les formations de l avant.) G Cotte (Comment ameliorer le pronostic des lésions articulaires du genou en chirurgie de guerre?) G Tisserand, (Resultats des interventions précoces dans les plaies articulaires par projectiles de guerre) B Desplas and D Chevalier
38 The Clearing Ambulance (Le fonctionnement d'une ambulance de triage du 25 au 30 septembre) A Latarjet.
39 The Field Hospital (15 jours de chirurgie dans un centre hospitalier de l avant au moment d une offensive) G Cotte
40 The Base Hospital (Statistiques operatoires intégrales d un service de chirurgie de l arrière au moment d une offensive.) R Leriche.

35 **Access to the Prostate Region**—Rochet discusses the various technics for this purpose, commenting on the narrow space available by way of the perineum, and the disadvantages by other routes He suggests as an improvement over them all, to mobilize *en masse* the entire perineum by separating from the side the middle fascia from its peripheral attachment to the entire ischio-subpubic triangle This releases the rigid support of the urogenital diaphragm which shuts off the small pelvis in this ischio-subpubic triangle He commences with Young s V incision The various steps of the technic are described in detail, and the advantages of the ample access afforded are extolled In two cases of cancer of the prostate he was much impressed with the facility of the *extériorisation énorme* permitted by this mobilization of the entire urogenital diaphragm

36 **Biologic Research on Wounds in War**—Forty-one articles on various aspects of military surgery were pub-

lished in the *Lyon Chirurgical* during 1915 and this number contains thirteen more Three are devoted to research on the biologic evolution of shell wounds, the general course, the initial proliferation of microbes, the natural curative processes, and the means to promote them Policard and Phelip demonstrate anew that the ulterior evolution of the wound is determined by what happens during the first four to six hours Substances to dissolve rather than to sterilize are needed at first, to clear the wound of mortified and dead tissues The dissolving action of hypochlorite gives better results later than measures to sterilize or tan the tissues The toxins absorbed from necrotic masses are responsible for the fever and collapse which develop before the germs have had a chance to proliferate much in the wound

Policard and Desplas report excellent results when they have ventured to suture extensive wounds without leaving the healing entirely to Nature There is always an inflammatory reaction, but it is usually insignificant and causes no general symptoms But it is always present, and always requires close supervision This is possible by repeated microscope examination of the serous fluid that oozes between the stitches It can be obtained with a pipet from quite a depth below the surface, and the microscope will show the defense the leukocytes are presenting and the increasing or decreasing numbers of germs A favorable sign is when the nuclei in the leukocytes take the stain intensely and seem to be more condensed and as if contracted

Leriche is convinced that mechanical cleansing of wounds and keeping them open to the sun and air are the ideals in military surgery Physiotherapy should supplant chemotherapy entirely as a rule, he reiterates

Lyon Médical, Lyons

April, CXXV, No 4, pp 105 140

41 *Reaction to Vaccination Against Typhoid and Paratyphoid (Etude des reactions humorales dans la vaccination antityphoidique et antiparatyphoidique A B — serum de Vincent) Tonnel
42 War Wounds of the Chest (Les plaies penetrantes de poitrine par projectile de guerre) Piery To be continued

41 **Reaction to Antityphoid Vaccination**—Tonnel has been studying the reaction as 5,000 men were vaccinated against typhoid and paratyphoid, and he here summarizes the detailed findings as recorded with minute care in thirty healthy soldiers and in twenty who were already under hospital care There was always more or less of a reaction evident in the blood and urine, but in some of the men it was so exaggerated as to be actually pathologic He noted with surprise that the reaction was least intense in the tuberculous and those with albuminuria, while some of the apparently healthy responded with a pathologic reaction There is always more or less destruction of red corpuscles, a loss of half a million may be regarded as the average This suggests the necessity for caution in vaccinating persons known to have unusually fragile corpuscles Kidney trouble also calls for caution After the vaccination the urine becomes much less toxic His test for this was with infusoria placed in the urine They die in a few seconds in normal urine The reduction in toxicity may be estimated from the length of the survival of the infusoria With a pathologic reaction to vaccination the infusoria persist unharmed in the urine while the uric acid and urobilin content of the urine is much increased, and the red count is much less

Paris Médical

April 15, VI, No 16 pp 377 392

43 Piping Drinking Water in the Trenches (Une installation urbaine de distribution d'eau dans les tranchees) G H Lemoine and C Duplessis
44 Heart Murmurs as Impairing Fitness for Service (Souffles cardiaques Aptitude militaire) O Josue
45 *Acute Nephritis in Troops on Active Service (Les néphrites aigues des troupes en campagne) M Gaud and P Mauriac
46 Rat Bite Fever (Cas de sokodu — septicemie éruptive par morsure de rat — observe dans la zone des armees) J Fievez

45 **Acute Nephritis in Troops on Active Service**—Gaud and Mauriac state that of the 2,000 sick and wounded who passed through their hands in the course of three months last fall, 6 5 per cent had acute nephritis and the proportion has grown larger since Acute nephritis was a rarity during the early part of the war After from three to six days of lassitude, headache and pains in the lumbar region, the edema develops in the course of a few hours, the face generally puffing up first This nephritis runs its course like an infectious disease, with a rapid and cyclic course The fever at first, the extensive edema, high blood pressure, high albuminuria and traces of blood in the urine are its main features

Under the influence of repose and milk diet, recovery was the rule in two weeks in an average, no case lasted longer than four weeks No complications were noted except in two cases, these men were in coma when brought in and had had several uremic convulsions and the urine contained up to 8 gm of albumin to the liter Venesection twice repeated brought rapid improvement and recovery in one case but the other patient succumbed This has been the only death from nephritis in the service No drugs were used except a little theobromin The hardships of the campaign reduce the resisting power of the kidneys so that albuminuria is frequent among the apparently well soldiers When some infection happens along the kidneys bear the brunt of its attack In five of these nephritis cases bacilli resembling those of typhoid and paratyphoid were isolated from the blood or urine

Presse Médicale, Paris

April 13, XXIV, No 21, pp 161 168

47 Facial Paralysis From War Wounds (Paralysies faciales de la guerre) E J Moure
48 Operative Treatment of War Wounds of the Chest (Du traitement chirurgical des plaies penétrantes de poitrine) Gasquet

April 17, No 22, pp 169 176

49 *Amebic Dysentery (Pourquoi avons nous failli méconnaitre la dysenterie amibienne?) P Ravaut and G Krolunitsky
50 Evils of Abuse of the Sling (Les echarpés) Rochard and Stern

49 **Amebic Dysentery in France**—Ravaut remarks that the war has signally modified many old medical as well as military conceptions As a typical instance he mentions a small epidemic of amebic dysentery in northern France, in persons who had never been in the tropics The stools contained the dysentery bacillus, and at first this was regarded as the agent of the dysentery, when in fact it had nothing to do with it The benefit from emetin helped to differentiate the amebiasis Even this fails at times or loses its efficacy, too long kept up it may act injuriously on the heart and impair the appetite Ravaut found it of great advantage in ensuring a permanent cure to combine salvarsan with the emetin

Progrès Médical, Paris

March 5 XXXII No 5, pp 35 40

51 Colloidal Sulphur Intravenously in Ophthalmology (Traitement des sclerites, kératites et iritis dites rhumatismales, par le soufre colloidal) Carlotti
52 *Silver Nitrate in Treatment of Vincent's Angina F Ramond
53 Training Mind and Muscles to Overcome Radial Paralysis (Traitement des impotences consecutives aux blessures de guerre par la reeducation psycho motrice) H Gosset

52 **Vincent's Angina**—Ramond has usually found the lesions of Vincent's angina unilateral or much more pronounced on one side The gland below the jaw is involved constantly and early The ulceration soon burrows deep while the exudation covering it grows thinner The ulceration takes two or three weeks or a month or two to heal, and leaves a deep cavity, sometimes the tonsil is almost totally destroyed In a third of his cases there were other lesions in the throat of another nature, in one case a syphilitic chancre on the tonsil In a recent small epidemic of diphtheria, there were five cases of associated diphtheric and Vincent's angina Of all the methods of treatment proposed, methylene blue, salvarsan and silver nitrate have given the best results, and Ramond is loyal to the last mentioned He paints the ulceration with a 2 per cent solution of silver nitrate The part is first wiped dry with cotton and then the ulceration is dabbed with a pad of cotton moistened with the silver solution The application is repeated twice a day for two days, then once a day till the fifth day By that time healing is well inaugurated

Archiv für Gynaekologie, Berlin

CV No 2 pp 151-315 Last indexed April 15 p 1277

54 *Human Ovum Only Two or Three Weeks Old (Ein junges menschliches Ei) S Schlagenhaufer and J Verocay
55 *Treatment of Genital Tuberculosis M Kroner
56 Factors Influencing Presentation of Fetus (Die Ursachen der Kindeslagen II Physikalisch experimentell Untersuchungen) F Schatz Conclusion of Part II
57 Early Stages of Corpus Luteum Production (Fruhstadien der Corpus luteum Bildung beim Menschen) W Reusch
58 *Ossification Process in Fallopian Tube (Zur Kenntnis der Knochenbildung in den Tubae uterinae) H Lehmacher
59 Fetal Ascites as Obstacle to Delivery (Geburtshindernis infolge von fotalem Aszites) J R E Meumann

54 **Young Human Ovum.**—An otherwise healthy woman died three hours after drinking lysol with suicidal intent and sections of the uterus revealed an embedded ovum of perhaps two to three weeks, one of the youngest that have been studied Colored plates show the details of its structure Most of the other specimens of the kind on record were from pathologic cases

55 **Treatment of Genital Tuberculosis**—Kröner reports *the present status of 25 women with genital tuberculosis for* which he operated from fifteen months to over four years ago Two have died since and the objective findings are not good in 5 others, although they feel well 18 are practically cured and have gained materially in weight, with earning capacity restored In his total 32 cases of genital tuberculosis in women in the last three years, the lungs were only slightly if at all affected in 3 The cases in which there had been perforation of the intestines, or tuberculous material had been left behind, gave naturally a less favorable outlook, and the course of the cases confirmed the gravity of such conditions The clinical picture of genital tuberculosis is often that of inflammatory processes in ovaries or tubes with extensive destruction of tissue and large collections of pus in ovaries or tubes or both The danger is great unless the whole can be resected But when both ovaries and tubes and the uterus down to the cervix are removed at a laparotomy this guarantees in most cases—when the genital affection dominates the clinical picture—a prompt and complete subjective cure with restoration of earning capacity and freedom from subjective disturbances The 32 cases described formed 14 per cent of his operative cases of diseased ovaries or tubes during this period Five of the women were between 15 and 20, and fifteen were between 20 and 30 One was over 50 Menstruation had been normal in 66 per cent. in 4 cases there had been amenorrhea for a few months, and in 2 there had been excessive bleeding In some cases there was no pain, in others much sacral pain and more or less abdominal pains All the women were ailing and weak, some actually confined to bed There was fever in 4 of the 21 cases of pure genital tuberculosis, and in 5 of the 11 with complicating tuberculous peritonitis Both tubes were always seriously involved Differential diagnosis is immaterial as the clinical picture of chronic disease in the uterine adnexa calls for a laparotomy regardless of its etiology If adhesions contraindicate excision of the focus, intervention must be limited to local medication of the abdominal cavity Kröner makes a point in all operations on the adnexa to wait until the temperature is brought down to normal before attempting to operate

58 **Ossification in Fallopian Tube**—Lehmacher has found five cases on record and adds two more to the list In his cases, the tubes had been removed from a married woman of 47 who had never borne children, and from the cadaver of a woman of 56 who had succumbed to heart disease Both tubes in each case were found obstructed with lime detritus around which bone had developed, with marrow

Berliner klinische Wochenschrift

April 17 LIII No 16 pp 413-440

60 Sclerous Eczema (Das schwielige — callöse — Ekzem) P G Unna To be continued
61 *Prophylaxis of Tetanus (Die Erfolge der Schutzimpfung gegen Wundstarrkrampf) Kummell.
62 *Improved Technic for Roentgenography of Fistulas (Die radiologische Darstellung der Ursprunge von Fistelgangen mittels einer vereinfachten und verbesserten Fullungstechnik.) G Holzknecht L Lilienfeld and F Pordes
63 *Connection Between Tonsillitis and Articular Rheumatism, and Danger for Military Efficiency (Zur Kenntnis des kausalen Zusammenhanges zwischen Angina und Gelenkrheumatismus und deren mogliche Folgen auf die Wehrfahigkeit.) Brodzki

61 **Prophylaxis of Tetanus**—Kümmell has been making special inquiry in various German hospitals as to the occurrence of tetanus during the ten or eleven months since the wounded have been given a prophylactic intramuscular injection of 20 units of tetanus antitoxin as a routine measure In one hospital that had previously had numerous cases of tetanus the only case since among 700 severely wounded was in the one man who by some blunder failed to get his intended injection Among 1,555 severely wounded men, only one case of tetanus developed, but this proved fatal He has found that during the period in question, only 42 cases have been known in army circles, although the soil, the weather conditions etc., are practically the same as the year before when the disease was so prevalent Of this 42, only 7 of the men had received a prophylactic injection The incubation period ranged from five to twelve days Aschoff and Robertson last year reported a compilation of 66 cases of tetanus which had developed notwithstanding a previous prophylactic injection, 36 terminated fatally, but the injection was made very late in all but 18, and 9 recovered in this group of 18 Kümmell emphasizes further that according to all reports, the protection conferred by the antitoxin lasts for only fifteen days, and, if the wound is very much soiled only a week's protection can be counted on Hence it is necessary to repeat the injection a week later if any operative measure, even the slightest, is contemplated It is better, also, to repeat the injection before any operation for a person who has had tetanus, even though a long interval may have elapsed Kümmell concludes by warning that a few persons seem to be especially susceptible to tetanus infection, and that it is impossible to count on effectual prophylaxis for them It is also difficult to realize when tetanus germs are harbored in overwhelming numbers He cites the statistics in this country of Fourth-of-July tetanus as further testimony to the value of antitetanus serum prophylaxis As to treatment, he says that no dependably favorable results have been realized to date with any method of treatment for tetanus when it is once under way (See abstract 5 in American Current Literature Department, this issue)

62 **Roentgenoscopy of Fistulas**—Instead of bismuth paste, Holzknecht and his co-workers use cocoa butter bougies containing bismuth or other opaque substance, with a little antiseptic. The bougies are made 8 mm long and 2 mm in diameter, and they are easily pushed up into the fistula, one after the other, until the fistula is filled up The bougie melts from the warmth of the body and flows into the recesses of the fistula while the outer end of the last one, in contact with the air, does not melt and thus it plugs the orifice A wash button is fastened over it, with plaster strips, to hold it in place A number of roentgenograms are reproduced with the bougie filling and with the ordinary bismuth paste filling, clearly showing they say, the advantages of the former Bismuth paste is liable to run out and give misleading shadows

63 **Tonsillitis and Articular Rheumatism.**—Brodzki relates that among the 1,200 sick marines in the navy hospital in his charge in the seventeen months of the war, no less than 610 were cases of tonsillitis, and in 10 per cent of these articular rheumatism followed He expatiates on the importance of rendering the tonsils less permeable to microbes, and insists that every recruit with enlarged tonsils or history of tonsillitis should have the tonsils removed as a prophylactic measure, or at least they should be thoroughly seared to provide a cicatricial barrier against infection from all sides

Deutsche medizinische Wochenschrift, Berlin

April 13 XLII No 15 pp 437-468

64 *Treatment of Puerperal Infection P Jung Concluded.
65 Parasite Found in the Louse as Possible Typhus Germ (Ueber einen als Erreger des Fleckfiebers verdachtigen Parasiten der Kleiderlaus) W Stempell
66 Diagnosis and Epidemiology of Dysentery (Ruhr) F Schutz.

67 Products of Disintegration of Blood Corpuscles in the Ultramicroscope ("Ueber eine neue, dem Rückfallfieber ähnliche Kriegskrankheit") A V Knack
68 Amputations and After Treatment (Grundsätzliches zur Frage der Amputationen im Felde und der Nachbehandlung Amputierter) G Seefisch
69 Present Status of Military Surgery (Ergebnisse der bisherigen kriegschirurgischen Erfahrungen) H Matti Concluded
70 Portable Extension Appliance for Fractured Arm (Behandlung der Schussfrakturen der Oberextremitat mit Extensions Brückenschiene) G Frank
71 *Tuberculin Does Not Mobilize the Tubercle Bacilli (Zur Frage der Mobilisierung der Tuberkelbazillen durch Tuberkulin) B Möllers and A Oehler
72 Improved Counting Chamber (Eine Zählkammer für zytologische und bakteriologische Zwecke) E Liebreich

64 **Puerperal Fever**—Jung concludes his long study of puerperal infection by emphasizing the paramount importance of the nursing of patients, care to ward off bed-sores, and nourishment at frequent intervals, possibly every hour, giving some nourishment even through the night The heart must be constantly supervised The puerperal fever may run a rapidly fatal course, but sometimes it drags along for weeks and months, the family alternately in hope and despair, and constantly urging the physician to "do something more," give intra-uterine douches, collargol intravenously, etc In yielding to these lay demands we must guard against doing harm By giving the intra-uterine douches ourselves, we can restrict them to the vagina and leave the uterus to its indispensable repose If the patient happens to improve after any remedial measures, Jung begs us to be critical enough to distinguish between *post hoc* and *propter hoc* and not to rush into print with the case

The tendency to remove the uterus in every severe case is less evident now than some years ago as we have no means for determining which are the really desperate cases until too late for hysterectomy to do any good The same objection applies to ligation of the pelvic veins Any chill may be the last one and recovery ensue, with or without the ligation The operation in itself has a high mortality, but it might be ventured in chronic cases with many chills but comparatively good resisting powers He adds that gonorrhea may induce a syndrome resembling the classic puerperal fever When preexisting gonorrhea is known the diagnosis is easy, but otherwise it is seldom thought of Women known to have gonorrhea should be kept in bed longer and special care be taken to avoid stagnation of lochia Ergot and the ice bag are especially useful here Bacteriologic examination of the secretions is the only means to positively differentiate gonorrhea This is important for various reasons, not the least of which is the exoneration of the physician or midwife for responsibility for the puerperal fever Gonorrheal puerperal fever almost invariably terminates in recovery, although it usually entails local changes The local gonorrheal affections require only conservative measures during their acute phase The woman is generally left incapable of further childbearing He warns further that the virus of tetanus is extremely hard to get out of a room that has once been infested with it Puerperal tetanus is almost inevitably fatal When typhoid is epidemic, it might be advisable to vaccinate the parturient against it

71 **The Tubercle Bacilli Not Mobilized by Tuberculin**—Mollers and Oehler report that examination of the blood of fifty-four tuberculous patients before and after injection of tuberculin failed to show any evidence that the tubercle bacilli are mobilized and driven into the blood by the injected tuberculin

Medizinische Klinik, Berlin

April 16, XII No 16, pp 407 432

73 Traumatic Fistulas and Their Treatment A Hoffmann
74 Organization of the Vienna Orthopedic Hospital and Training Schools for the Maimed (Organisation und Aufbau des Orthopädischen Spitales und der Invalidenschulen) H Spitzy
75 *Febrile Infectious Jaundice, Thirteen Cases (Zur Klinik der Weilschen Krankheit) F Trembur and R Schallert
76 Narrow Aorta and Fitness for Military Service (Aorta angusta und Kriegsdienst) H Strauss
77 Unrecognized Perforation of Small Intestine in Ambulant Typhoid, Four Cases (Nicht erkannte Dünndarmperforation nach Typhus ambulatorius) Fuhrmann

75 **Acute Infectious Jaundice**—Trembur and Schallert remark that the recent discovery of the spirochete causing Weil's disease was made on the group of cases they here report in detail, eleven in all, scattered through five months The illness came on suddenly, with headache, sacral pains and leaden fatigue in the limbs, soon changing to pains, especially in the calf muscles and thighs The pains were sometimes so severe that the men cried out, and the muscles were unbearably tender to the lightest touch The jaundice did not develop until from three to seven days after the onset of symptoms Vomiting, nose-bleed, mucous diarrhea followed by constipation, swelling and redness of the conjunctiva and throat, vertigo and pains in swallowing were other features of some of the cases An initial chill was noted in three cases, in the others there was merely a sensation of chilliness before the fever came on The fever charts show one or more relapses of the fever in some cases, bronchitis was evident in all Necropsy revealed pneumonia in the one fatal case, and hemorrhagic erosions and follicular ulceration in the mucosa of the large intestine from the rectum to the ileocecal valve The liver was enlarged in all but three and the area of heart dulness was enlarged, the pulse small, rapid and irregular An operation for gallstones was done in one of the earlier cases, but none were found and the diagnosis was then corrected to Weil's disease In treatment, stress was laid on food that promoted coagulation of the blood, red wine gelatin and meat juice jelly Convalescence was slow Air cushions were used to prevent bed-sores, the position was frequently changed and the men were urged to "breathe deep" Diuresis was promoted by subcutaneous injection of 0 85 per cent salt solution

Munchener medizinische Wochenschrift, Munich

April 18, LXIII, No 16, pp 557 592

78 *Edema of the Kidney (Ueber Nierenödem) E Meyer
79 *The Eosinophils as Guide in Tuberculin Treatment (Ueber die Bedeutung der eosinophilen Leukozyten bei der Durchführung einer Tuberkulinkur) O Brösamlen
80 Photo-Activity of Body After Exposure to Mesothorium (Verbreitung von Mesothoriumenergie im Korper der therapeutische Bestrahlten nachgewiesen durch Photoaktivitat) B Schweitzer
81 Streptococcus plus Diphtheria Bacillus Meningitis F Reiche
82 *Treatment of Vulvar Pruritus (Zur Aetiologie und Therapie des Pruritus vulvae) H H Edenhuizen
83 Psychologic Considerations on the War (Kriegspsychologisches) W Fuchs
84 Official Prophylaxis of Typhoid (Die amtsarztliche Bekampfung übertragbarer Krankheiten VII) M Henkel Concluded
85 Means to Determine Presence of Metallic Iron in the Eye Portable Sideroscope (Ueber Sideroskopie.) E Hertel
86 Bullets Lodged in the Tissues (Das Steckgeschoss) O Witzel
87 Traumatic Shock and Collapse (Traumatische Gefasskrisen) S J Thannhauser
88 Appliances to Correct Brachial Paralysis (2 Apparate bei Verletzungen des Plexus brachialis—C_5, C_6) O Stracker
89 Operating Under First Whiffs of Ethyl Chlorid (Der Chlorathylrausch in der Kriegschirurgie) G Hosemann
90 Bone Flap From Skull Near by to Close Gap in Skull (Zur Deckung von Schadeldefekten) H Rühl
91 Management of Fracture of the Femur in War (Ueber die Versorgung der Oberschenkelschussfrakturen im Kriege) L v Stubenrauch
92 Bile Agar for Cultivation of Typhoid Bacilli (Ueber die Koenigsfeldschen Galleschragagarröhrchen zur Typhusbazillenzüchtung) L Lohner

78 **Edema of the Kidney**—Meyer applies this term to serous infiltration of the kidneys themselves The kidneys of persons who have died from chronic parenchymatous nephritis are often enlarged and abnormally heavy from this serous infiltration, and he thinks that this is responsible for more of the various symptoms than is generally recognized In a typical case of renal dropsy in a young woman who had long refrained from salt in her food, he scarified the legs and in forty-eight hours 11,700 c c of edema fluid thus drained away and by the fourth day she had lost in this way 14 liters of fluid Diuresis improved at once and the general condition After five days of improvement the condition grew worse again, the urine output declined to 500 c c and the anasarca increased again On repeating the scarifications, the condition improved remarkably anew and has persisted good during the year since Except for occasional slight swelling of the ankles and legs the aspect is normal, the urine output keeps between 1,600 and 1,800 c c, the specific

gravity about 1 010, the albumin content between 5 and 8 1,000 The blood pressure and fundus of the eyes have shown no pathologic changes The case is cited as confirming the assumption that the kidneys were suffering from serous infiltration, as well as the other tissues and organs The edema included the kidneys, and the functioning of the kidneys had suffered in consequence The condition was similar to that with stasis in the kidneys which can be relieved by venesection or decapsulation The benefit from the latter is probably due to the same mechanism, relieving the tension from the edema of the organ When diuresis sets in after decapsulation and the kidney functioning improves miraculously, as many have reported, Meyer thinks that the same result might probably have been attained by breaking up the vicious circle at some other point Scarification seems to be the simplest and most harmless of all means for this purpose At least, he insists, it should be given a trial before resorting to an operation

79 **Behavior of the Leukocytes as Guide in Tuberculin Treatment.**—Brosamlen has found the changes in the morphologic blood picture useful as biologic criteria for the effects of tuberculin treatment He examined the blood three times a day after the daily injection of tuberculin There was always more or less leukocytosis, most marked and most durable when the temperature reaction was most pronounced The neutrophils and the eosinophils showed the greatest proportional increase Those patients who bore the tuberculin well and showed improvement under it, both subjective and objective, always reacted to the injection with an increase in the eosinophils There was no increase when the therapeutic effect of the injection was interfered with by an intercurrent affection or other cause It proved possible by this regular examination of the blood to foretell—from the absence of any increase in the eosinophils—when an intercurrent affection or the like was impending, and, by reducing the dosage or lengthening the intervals, be prepared to meet it. Those patients who showed no increase of eosinophils or a decline did not thrive under the tuberculin treatment It seems probable that the eosinophilia may be regarded as an index of the development of certain protective forces Cases in which these do not develop—as indicated by the absence of an increase in the numbers of eosinophils—he regards as unsuited for tuberculin treatment, other things being equal

82 **Treatment of Vulvar Pruritus**—Edenhuizen is convinced that most cases of vulvar pruritus are due to irritation from the secretions Hence she combats it by careful cleansing, painting with tincture of iodin, and keeping all moisture away from the region All cleansing of the anus and vulva is done with cotton wads dipped in oil Exercise is restricted to avoid perspiration, and the vagina and entire genital region are kept powdered dry, three times a day Tampons in the vagina collect the discharge during menstruation With this combined treatment kept up for six or eight weeks, the irritation subsides completely and the pruritus is permanently cured after possibly years of torment The details of six typical cases are given She warns that the iodin may smart for an hour or so, in two cases she had to inject a sedative on this account. In these cases there was eczema in the vulvar region The iodin and powder applications were repeated every third and later every fifth day when there was eczema Zinc oxid was the powder used mostly The cure, she reiterates, depends on keeping all moisture away from the region After urination and defecation the meatus and anus are wiped with oiled cotton, then with dry cotton and then powdered

Gazzetta degli Ospedali e delle Cliniche, Milan

April 8 XXXVII No 28 pp 433-448

93 *Tuberculosis in War (Tubercolosi in guerra) A Fagiuoli

April 9 No 29 pp 449-464

94 Examination of Infants Stools as Aid in Diagnosis (L'esame delle feci nelle malattie gastrointestinali del lattante) G Funaioli

93 **Tuberculosis and War**—Fagiuoli in commenting on the numbers of soldiers found to be tuberculous, says that the hardships and vicissitudes of the campaign are ample to explain the rousing of latent tuberculous processes to an active destructive course, but that probably direct recent contagion is responsible for a certain proportion of the morbidity On the other hand, he knows of instances where the camp life seems to have given the finishing touch to the cure started under sanatorium or dispensary treatment, and the men are now found rugged and free from any signs of tuberculosis He urges that every province should make arrangement for one or more sanatoriums for tuberculous soldiers and that measures should be taken to make the soldiers take the needed courses of sanatorium treatment The soldier has but one wish, he says, and that is to return to his family, and the sick long for this even more than others So it will be a difficult matter to get them to take proper sanatorium treatment The military authorities may have to refuse to discharge the man from the army after the war until he has taken the required course of treatment The sanatorium physician should be empowered to keep the man three or six months as his condition requires

Policlinico, Rome

April 9 XXIII No 15 pp 453 484

95 Aphasia in Typhoid in Children (Contributo clinico allo studio dell afasia nella febbre tifoide dell infanzia.) F Laureati

April Medical Section No 4 pp 97 128

96 *Tuberculous Meningitis Simulating Incipient Tabes (Meningite tubercolare emorragica a lungo decorso, con sindrome e lesioni istologiche di tabe iniziale) F Alzona

97 Endoscopy in Diagnosis and Treatment of Bacillary Dysentery G Izar

96 **Tuberculous Meningitis Simulating Tabes**—Alzona describes the case of a girl of 15 who developed pains in the spine and legs, headache and vomiting after meals, with delirium These occasional symptoms kept up for six months The Romberg and Westphal signs were positive and there were also pronounced ataxia, gastric crises and girdle pains The cerebrospinal fluid was hemorrhagic but inoculation of animals was always negative Necropsy revealed tuberculous foci in the lungs and meninges but other lesions suggested those of tabes The case confirms the assumption that the hemorrhagic type of tuberculous meningitis is liable to induce lesions in the nerve roots like those of tabes

Brazil-Medico, Rio de Janeiro

April 1 XXX No 14 pp 105 112

98 *Ileosigmoidostomy for Extreme Ptosis of Transverse Colon (Um caso de constipação rebelde pela ileosygmoidostomia) C. Werneck and C Bicalho

98 **Ileosigmoidostomy for Intractable Constipation**—The man of 41 for ten years had sometimes had intervals of thirty or more days between stools, up to forty-five days The trouble was extreme ptosis of the transverse colon, as the simplest means to remedy it, the ileum was divided and both stumps were implanted in the sigmoid flexure This ensured the drainage of the excluded portion, and the man was restored to clinical health at one stroke

Semana Medica, Buenos Aires

XXIII No 1 pp 1 50

99 Treatment of Diffuse Aneurysms (Tratamiento del hematoma arterial o arteriovenoso) R A Marotta

100 Reforms in Midwife System (Nuestro gremio de parteras Reformas necessarias para su mejoramiento y dignificacion) J A Beruti

101 Antipertussis Vaccine (A proposito del suero contra la coqueluche.) P Ivanissevich

102 The Defensive Role of the Anterior Epithelium of the Crystalline Lens F M Urra

No 2 pp 31 58

103 Operative Treatment of Hemorrhoids (Tecnica facil para operar hemorrhoides) B Vassallo and S P Lavallen

104 Intravenous Iodin Treatment of Tropical Sore A A da Matta

105 Abortionist Midwives (La obstetricia ilegal Observaciones del medio rural) B Bosio

106 Amebic Dysentery in Spain F F Martinez.

Mitteilungen a. d. med Fakultät der k. Univ, Tokyo

XV No 2 pp 243 395 German Ed last indexed May 20 p 1665

107 Racial and Sex Variations in the Bone Framework of the Legs (Ueber das Unterextremitatenskelett) K Shiino

108 *Pathogenesis of Epithelioma (Experimentelle Studie über die Pathogenese der Epithelialgeschwülste) K Yamagiwa and K Ichikawa

109 On the Fifth Lumbar Vertebra of Adult in Radiography S Jinnaka (In English)
110 *Action of Epinephrin on Secretion of Sweat (Ueber die Wirkung des Adrenalins auf die Schweisssekretion, zugleich ein Beitrag zur Kenntnis der doppelsinnigen Innervation der Schweissdrüse) K. Muto.
111 Phenolsulphonphthalein Tests of Kidney Efficiency, Especially in Beriberi (Phenolsulfonphtalein als funktionelles Nierendiagnosticum Klinische Untersuchungen über die Funktion der Nieren bei Kakke mit seiner Hilfe) K Goto

108 **Pathogenesis of Epitheliomas**—This communication reports the results of research financed by the Japanese Cancer Research Society It is profusely illustrated with twenty plates which show the successful outcome in 61 5 per cent of the experiments It was found possible to induce the production of an epithelioma at will on the ears of rabbits painted systematically with tar This occurred on thirty-two of the fifty-two ears thus treated for several months In three cases the epithelioma showed the typical infiltrating growth of carcinoma, but there was no tendency to metastasis apparent in any case, and attempts at transplantation never gave positive results The experiments related are said to confirm Yamagiwa's statement that no superposed specific irritation is necessary for carcinoma to develop, all that is necessary is to continue the irritation that has brought the soil into the precancer stage The experiments further confirmed the importance of age in development of cancer The increased keratosis under the influence of the tar applications may be regarded as an artificial senility of the skin in the region painted

110 **Action of Epinephrin on Secretion of Sweat**—Muto's sixteen mostly two-page charts show the increase in sweat production when epinephrin, atropin, chloral or pilocarpin was injected intravenously or subcutaneously into twenty horses, four sheep, three calves and two cats Photographs are also given showing the pools of sweat under one of the horses under the influence of epinephrin, and the pool of saliva under pilocarpin He collected the sweat with a large funnel-shaped leather bag extending under the entire body and neck of the horse The total amount of sweat from one horse under the epinephrin was 1,230 c c The research was undertaken to ascertain whether or not the sweat glands are innervated by the sympathetic system exclusively The findings indicate that both the sympathetic and the parasympathetic systems are involved The latter predominates in man, cats and cattle, while the former is chiefly involved in the horse and sheep

Russkiy Vrach, Petrograd

XV, No 9, pp 193 216

112 Iron Atoms in the Blood (O sostoyanii atoma zheleza v krovi) A I Danilevsky
113 The Therapeutic Value of the Sand Baths of Enotaievsk, Astrakhan (Estestvennia pesochnia vanni) V A Skvorzoff
114 *Suture of Vessels (O sosudistom shvie) V N Novikoff
115 The Mode of Action of Vasoconstrictors and Vasodilators With Internal Hemorrhage G A Lubenetzky

114 **Suture of Vessels**—Novikoff found in Carrel's method of suturing injured vessels an ideal physiologic procedure which deserves widespread use, even in the absence of suitable instruments and silk Suturing of even small vessels gives excellent results if the edges of the torn vessels are freshened and cut obliquely, or in any other way to prevent narrowing of the lumen Traction on the ends of the vessel must be avoided Suppuration does not prevent vessel suturing, but Esmarch's band must be ready for use in order to prevent a possible secondary hemorrhage He gives histories of 8 cases with complete success in 5 In 2 the suture yielded, and secondary hemorrhage occurred on the seventh day in one case after the operation, which necessitated ligation of the vessel One patient died the day following the operation because of severe loss of blood before and during the operation In the other 5 cases smooth recovery followed

Hospitalstidende, Copenhagen

March 29, LIX, No 13, pp 273 303

116 *Low Gravity Abscess From Tuberculous Process in Sacrum (Pyriformis Abscessen) T Rovsing
117 *Dyspepsia With Chronic Alcoholism F Vogelius and G Wiltrup Commenced in No 11

116 **Pyriform Abscesses**—Rovsing applies this term to the puzzling abscesses and fistulas above and near the hip joint which return with exasperating persistence again and again after being curetted and apparently healed He had about given up the hope of ever curing cases of this kind, when the introduction of bismuth paste as a diagnostic measure cleared up the puzzling syndrome at once It showed that the low abscess was merely the lower part of an hour-glass abscess, the upper and primary process being in the inner surface of the sacrum The pus sinks down along the pyriformis muscle and emerges with this muscle through the greater foramen It collects below where it is usually mistaken for a primary process in the trochanter or hip joint or for bursitis He reports four cases with a typical recurring course for eleven, eighteen and twenty years before the bismuth paste revealed the true nature of the trouble. It was an easy matter then to cure it permanently by curetting and providing ample drainage This cannot be realized with a parasacral incision, so he incised on the median line and resected the coccyx The focus was then reached by working subperiosteally from the lower margin of the sacrum The focus was thoroughly scraped out and the fistula below flushed with 6 per cent aqueous solution of phenol The pelvic fascia were left undisturbed and a stout-walled drain was introduced into the focus, the lower end brought out through the incision below The skin was sutured around it with aluminum-bronze wire He says that Beck's book on the use of bismuth paste gives illustrations of two typical cases of this pyriformis abscess Rovsing does not agree with Beck, however, that bismuth paste is an effectual therapeutic measure, on the contrary, as it plugs the fistula, the secretions accumulate above and dire damage may result. With the above described operative measures his four patients were entirely cured in about seven weeks

117 *See abstract 61, page 1498*

Svenska Lakaresallskapets Handlingar, Stockholm

1915 XLI, No 3, pp 411 550 Last indexed Sept 4 1915, p 914

118 Report of Medical Committee on Measures to Check the Spread of Venereal Diseases (Medicinalstyrelsens utlåtande angående reglementeringskommittens underdåniga betankande Till Konungen)
119 Research on Immunity to Pneumococcus Infection (Studier över pneumococc immuniteten) J Tillgren

No 4, pp 551 632

120 Ligation of Splenic Vessels as Effectual and Harmless Substitute for Splenectomy in Blood Diseases (Om underbindning av mjaltkarl såsom ersattningsoperation for splenektomi vid blodsjukdomar) A Troell
121 Inflammation of Tendon and Sheath With Crackling Sounds (Om den s. k tendovaginitis crepitans) A Troell
122 Gage for Angles of Joints (En ny goniometer för mätning av de långa skelettbenens vinklar) G Backman
123 Gage for Angle of Torsion (En ny tropometer) G Backman

XLII No 1 pp 1 308

124 *Operative Treatment of Glaucoma (Om sklerektomi vid glaukom) K G Ploman.

124 **Sclerectomy for Glaucoma**—The 308 pages of this number of the *Handlingar* are all devoted to the experiences of K G Ploman with operative treatment for glaucoma He reviews the history and the literature, and compares the results of Holth's sclerectomy and Elliott's trephining operation and other measures He also reports considerable experimental research Over forty pages are given to the tabulated details of his 151 cases, and a six-page summary in German is appended His conclusions from this material are that the danger of tardy infection renders it necessary to be extremely chary with sclerectomy It should never be done in prophylaxis With acute glaucoma, only when other measures have proved ineffectual should sclerectomy be considered With chronic glaucoma, however, Holth's sclerectomy is followed by permanent reduction of tension in a large proportion of cases In chronic cases rebellious to other methods, sclerectomy must be undertaken regardless of risk of tardy infection The younger the patient, the greater the reserve necessary on account of the dangers from infection later With chronic glaucoma and contraction of the field of vision to near the point of fixation, sclerectomy with peripheral iridectomy may be preferable to simple iridectomy

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THE NONSPECIFIC FACTORS IN THE TREATMENT OF DISEASE [*]

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As a natural consequence of the phenomenal advances of the past thirty or forty years in our understanding of disease processes and in what may be termed therapeusis by means of biologic products — advances largely the result of laboratory and more especially immunologic research — medical consciousness, if we may so regard the literature, has rather wholly centered about ideas of specificity, and, taking its cue from the laboratory, has regarded with considerable skepticism and frank disapproval any reference to observations, especially if clinical, at variance with the current trend of thought And yet one finds a not inconsiderable accumulation of evidence, both from the laboratory and from the clinic, forming in a measure an undercurrent, definitely indicating a much larger share of certain nonspecific and as yet ill defined factors in recovery from disease While the emphasis placed on certain phases of immunology and specificity, more especially the fruitful antigen-antibody conception of Ehrlich, has been of inestimable value, we rather believe that it has resulted in the neglect of certain perfectly obvious lines of approach to medical problems

Quite early in the development of the tuberculin therapy it will be recalled that Matthes[1] demonstrated conclusively that to all intents and purposes the reaction considered specific for tuberculin could be produced when deutero-albumose was used, and showed that whatever difference occurred could be explained by the fact that the tuberculin fraction contained certain toxic peptones in addition Matthes went even farther, expressing the idea that fever in general was produced by protein split products and suggested the importance of proteolytic ferments in this connection, thus foreshadowing the work of Vaughan in this country and the later German workers in anaphylaxis

The history of the treatment of typhoid fever with vaccines is quite similar Fraenkel many years ago demonstrated, in a convincing series of cases, the therapeutic value of typhoid vaccine used subcutaneously Directly Rumpf followed him with a series of cases treated with a vaccine of *Bacillus pyocyaneus* with equally favorable results But since the medical profession could see no merit in a nonspecific method, the entire subject was dropped for a considerable period of time In this country, too, the controversy occasioned by the Schafer vaccine is pertinent Here was a biologic product, which, according to the observation of many competent observers, did at times produce striking results in a variety of infectious diseases, whether or not it was a safe remedial measure, and whatever may have been the defects, is not pertinent in this connection The very fact that it did do certain things at times should have led to a study of why such favorable changes were brought about The fact that it was palpably nonspecific, however, was sufficient to warrant the stamp of disapproval by the medical profession

It is only within the last two years that a certain definite movement away from this rather narrow point of view has occurred, and it is significant to note that Wright,[2] than whom, of course, no one man has stood out more emphatically for specific therapy, recently made the following statement in this connection

> All those who have had much experience with vaccines will have seen cases where therapeutic effects, lying quite outside the range of the particular vaccine employed, *and therefore, as we thought, not quite creditable to science,* have been obtained by vaccine therapy

Schmidt[3] is among those who have called attention to the fact that following vaccine therapy of any kind the body becomes resistant to a variety of the commoner infections So too, it seems that during carcinoma and pregnancy (both, by the way, conditions distinguished by their high antiferment titer) a relatively low "infection index," as Schmidt terms it, is established

Von Wagner utilized a similar nonspecific method when he obtained favorable results in paretics treated with tuberculin, and only recently Blach[4] has reported a series of cases of early syphilis treated with tuberculin

We cite these not to recommend the treatment, because it hardly seems warranted, possessing as we do much more efficient agents, but to indicate the same general phenomenon of a therapeutic effect from a nonspecific method

It is in the domain of coagulation disturbances that therapy of this nature has received particular attention in the past The beneficial effect of subcutaneous serum injections in hemophilia is well recognized, although here too the exact mechanism is unknown Originally the slight leukocytosis was regarded as the potent factor, but for this there is no warrant Results have been obtained with homologous and heterologous serum, and with whole blood, but decisive results depend considerably on the dosage, and marked fluctuations in coagulation time frequently occur following such injections That such injections do not alter the disease process through supplying directly some deficiency, but rather through stimulating the elaboration of some substance before lacking, would seem to be the conclusion reached by recent workers This would agree with the stimulating effects observed from injecting serum and whole blood subcutaneously in tuberculosis and pernicious anemia (Esch, Busse, Weber)

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[1] Matthes M Deutsch Arch. f klin Med 1895 xlv

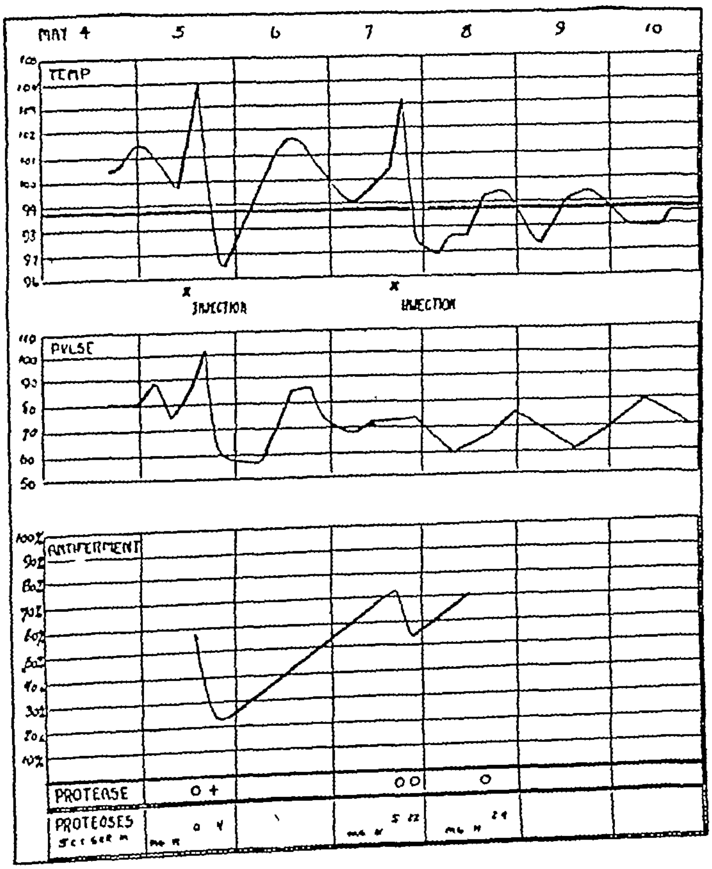
[2] Wright A Brit. Med Jour 1915 ii 620

[3] Schmidt R. Med Klin. 1910 No 43

[4] Blach M Wien klin. Wchnschr 1915 No 49

The dermatologists have within the past two years had similar results in a variety of diseases, including some cases of psoriasis which had proved refractory to other methods of treatment As a rule the homologous serum was injected intravenously in these cases

The therapy of typhoid fever has so far been the chief avenue of approach to the problem A number of vaccines have been elaborated and used subcutaneously during recent years for therapeutic purposes, and the results have been, in general, very encouraging It was not, however, until such vaccines were used intravenously that the striking pictures of complete abortion of the disease were obtained Then Kraus[5] observed that colon vaccines gave an identical result, while the typhoid vaccine was of marked benefit in certain cases of pelvic infection Ichikawa[6] found that his paratyphoid patients recovered with a typhoid vaccine, while Ludke[7] went a step farther, using a nonbacterial protein split product—a deuteroalbumose — with equally favorable results, in typhoid fever The effect of such an injection of secondary proteoses in typhoid fever is shown in the accompanying chart



Intravenous injection of secondary proteoses in typhoid fever J S (City Hospital, courtesy of Dr McCabe) Illness commenced April 29, one week before admission to hospital, Widal positive on admission, 1 5 c c proteoses injected intravenously May 5 (2 per cent solution), 2 c c proteoses injected intravenously May 7 (4 per cent solution) Protease became positive after first injection Lipase titer increased from 0 6 c c hundredth normal sodium hydroxid, May 5, to 1 9 c c hundredth normal sodium hydroxid per cubic centimeter of serum, May 8 Proteoses in the serum increased from 0 1 mg (nitrogen) per 5 c.c. serum to 0 24 mg, May 8

Apart from the action of the vaccines, the protein split products, and the effect of both homologous and heterologous serums, observations are recorded of the effect of milk injected intramuscularly (Schmidt), salt solution (Mitlander), dextrose solution, colloidal metals, distilled water (animal experiments) and ferments (including the leukocytic extract of Hiss and Zinsser) It seems probable that the reaction and beneficial effects observed from these substances is based on a similar mechanism in all cases

SELECTIVE STIMULATION

Latterly the hematopoietic organs have come to be recognized as the chief source of antibodies, a recent paper by Becht and Leuckhart[8] demonstrating in a convincing way that the circulating antibodies are not derived from the tissue cells in general, an origin that would presuppose the discharge of these substances into the general circulation by way of the lymph stream As a corollary of this idea concerning the source of the antibodies, it would seem reasonable to suppose that any disturbance of the hematopoietic system might alter the antibody formation, an observation of Moreschi[9] quite bears this out Moreschi noted the persistent absence of agglutinins in leukemic patients suffering from a superimposed typhoid infection

In view of these facts, it would seem possible that the various agents act as stimulants of the hematopoietic tissue, which, as a consequence, suddenly floods the body with antibodies, thereby overcoming the infection According to the idea of Wright, vaccine injections were supposed to be followed by a negative phase, at least as far as the opsonic power was concerned Contrary to this generally accepted view, Bull[10] has recently shown that this does not hold true following the intravenous injection of a typhoid vaccine in immunized rabbits Bull noticed that the antibodies were not diminished, on the contrary, they were rapidly increased following the injection If this is the mechanism involved, it is important to keep in mind that the stimulus itself is not a specific factor, but that the hematopoietic system has been attuned to respond to a nonspecific stimulus with the production of specific substances Dunklin, working in this laboratory, finds that a marked increase in antibodies follows the intravenous injection of proteoses in immunized rabbits In a general way this mechanism of recovery would consist of a selective stimulation of the hematopoietic system by nonspecific substances

THE LEUKOCYTOSIS

The importance of the leukocytic reaction has been emphasized by Gay and his associates They believe that the recovery following such intravenous therapy (they worked with a modified typhoid vaccine) is due to a specific hyperleukocytosis More recently, however, McWilliams[11] has observed that this hyperleukocytosis is apparently not specific to the degree indicated by the work of Gay and Claypole,[12] and that even normal rabbits respond with a marked leukocytosis to the intravenous injection of typhoid vaccine This coincides with our own experience We must keep in mind, too, the fact that in typhoid fever particularly, the normal course of recovery is not marked by a leukocytosis, on this ground alone we might be justified in seeking the influence of some other factor or factors in the recovery following intravenous therapy

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[5] Kraus, R Wien klin Wchnschr, 1915, p 29

[6] Ichikawa S Ztschr f Immunitatsforsch, Orig, 1914, xxiii, 32

[7] Ludke, H Munchen med Wchnschr, 1915, lxii, 321

[8] Becht, F C, and Leuckhart, A B Am Jour Physiol 1916, xl 36

[9] Moreschi, C Ztschr f Immunitatsforsch, Orig 1914, xxi, 410

[10] Bull, C G Jour Exper Med, 1916, xxiii, 449

[11] McWilliams, Helen Jour Immunol, 1916 i, 259

[12] Gay, F P and Claypole, E J Specific Hyperleukocytosis, Arch Int Med, November, 1914, p 662

THE HYPERPYREXIA

It is a common clinical experience that in some diseases, among them subacute joint diseases, neuralgia, diabetes, pernicious anemia, certain dermatoses, sarcoma, etc, distinct beneficial results follow at times on some intercurrent febrile condition Is it possible, therefore, that these varied agents influence the course of the disease by producing a high temperature?

A long list of investigators, among them Walther, Hildebrand, Englehardt, Rolly and Meltzer, have reached the conclusion that a high temperature (from 40 to 42 C or 104 to 107 6 F), artificially produced, has a favorable influence on an established infection Lower temperatures, on the other hand, as recently noted by Winslow and his associates,[13] would seem to retard the formation of immune bodies Inasmuch as a very sharp febrile reaction almost invariably follows the intravenous injections, the importance of this phase of the subject cannot be overlooked In our own cases we have at several times observed a reaction temperature of 107 F within one-half hour following a proteose injection (in typhoid patients) , unaccompanied by a change of the pulse rate of any moment or other untoward symptoms

THE MOBILIZATION OF FERMENTS

We have already[14] pointed out that in experimental animals the intravenous injection of bacteria, kaolin, protein split products and trypsin is almost invariably followed by more or less marked mobilization of serum protease and usually of lipase (esterase)

In the patient a similar reaction occurs following the intravenous injection of vaccines and proteoses, but not to the same degree nor with the same regularity as in animals In considering the possible effects of such a mobilization of ferments, both protease and lipase, we must keep in mind that a variety of reactions may occur The serum protease, as other tryptic ferments, is without effect on bacteria, but if we consider the source of the intoxication occurring in the diseased organism as primarily due to protein split products, then such a mobilization of protease may be of considerable importance in the process of detoxication, in that the toxic fragments are hydrolized to lower and nontoxic forms We have discussed this possibility in detail in its relation to pneumonia [15]

As a result of this effect the diseased organism would rid itself for the time being of the toxic substances circulating at the time of the injection, although the disease process itself, and the infecting organisms, would possibly continue in existence capable of further injury This would seem to be the explanation for the clinical picture obtained after intravenous therapy in such instances in which only an incomplete or transitory effect results In all these cases the patients present a considerable improvement, both subjectively and objectively, on the day or days following the injection, despite the fact that the temperature may recur or even continue uninterruptedly

The influence of the fat-splitting ferments mobilized is as yet obscure In the ultimate analysis, of course, we must turn to ferments of this nature for the attack on the invading organism, because it is more than probable that the actual surface of the bacterium consists largely of lipoids, or intimate lipoprotein combinations, for the destruction of which fat-splitting ferments are essential In certain infections with lipoid-rich organisms, such as tubercle and lepra bacilli, the clinical demonstration of the association of a high lipase titer in the serum, with a favorable prognosis, has been well established At present, however, the subject is still one in which only diligent inquiry will furnish definite knowledge

THE INCREASE IN ANTIFERMENT

When discussing the low "infection index" observed during the course of certain conditions, among them carcinoma, pregnancy and following vaccine therapy (Wright emphasized the latter finding particularly in his report on the antipneumococcus vaccination at the Premier Mine), we called attention to the fact that during such states a relatively high antiferment index is a well recognized accompaniment The question arises whether this is a mere coincidence or whether there is some causal connection between the antiferment increase and the increased resistance to infection

We have previously shown that the antiferment power of the serum depends on the amount of unsaturated lipoids present in a highly dispersed state in the serum [16] Consequently, any factor that will tend to increase these lipoids, be it by increasing the supply or by decreasing the utilization (as when the lipase in the serum is decreased) by injuring tissue cells and causing them to discharge such lipoids to the blood stream, will increase the antiferment titer, while conversely, any influence decreasing these lipoids, their dispersion or their unsaturation, will tend to decrease the titer

It is particularly the state of dispersion of these lipoids that is ignored by most investigators of their physiologic properties Serum lipoids in coarse dispersion are inactive as antiferments as well as in the mechanism of coagulation, a fact that should be kept in mind when the effects of lipemia are considered

Wright worked with saprophytic and serosaprophytic organisms, and noted that the addition of antiferment to the culture medium completely checked the growth of the serosaprophytic bacteria, and found that even the saprophytic bacteria grew less luxuriantly when no trypsin was added In view of the results obtained by Rettger, Berman and Sturges,[17] showing that the ordinary infectious organisms are not able to derive their protein requirement from native or even partly hydrolized proteins, but probably solely from the lowest degradation products, the direct influence of the antiferment cannot be so simple as Wright would assume The antiferment inhibits only the action of the tryptic and not the peptolytic and ereptic ferments Of course, when we are dealing with a definite tryptogenic organism it becomes apparent that an increase in antiferment would offer an increased factor or resistance against its growth

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[13] Winslow C A Miller J A and Noble W C. Proc. Soc. Exper Biol and Med 1916 xiii 93

[14] Jobling J W and Petersen William Bacteriotherapy in Typhoid Fever The Journal A M A Aug 7 1915 p 515

[15] Jobling J W Petersen, W and Eggstein A A Jour Exper Med, 1915 xxii 568

[16] Jobling J W and Petersen William Jour Exper Med 1914 xix 459

[17] Rettger L. F Berman N and Sturges W S Jour Bacteriol 1916 i 15

An increase in the serum lipoids affects bacterial growth, however, in another way, since an adsorption of lipoids occurs at the surface of the bacteria The relation of this adsorption, seemingly a nonspecific and purely physical process, to the phenomenon of sensitization, is as yet not clear It is reasonable to suppose, however, that the metabolic exchange of the bacterial limiting membrane is markedly influenced by increased lipoidal adsorption on the surface, resulting not only in influencing the metabolism unfavorably, but possibly preventing the excretions of substances protective for the bacterium (leukocidins, virulins, etc)

The immediate effect of the vaccine and proteose injections is not an increase, but a distinct decrease in the antiferment titer for a short period of time, followed later by a rise It is probable that the decrease is due to the chill which occurs after the injections, the increased metabolic demands of the organism being met in part by the rapid utilization of the serum lipoids

CONCLUSION

It seems probable that the fundamental change on which the majority of the above described biologic reactions are based is one of colloidal dispersion, in that the injections bring about a less dispersed state affecting not only the serum proteins but also the serum lipoids Such an alteration is sufficient to account for the fluctuations in the ferment-antiferment balance, and in the coagulation mechanism, as well as in the opsonic and complement powers of the serum, although it does not at present explain the increased antibody titer With this as a basis we can understand that so many and diverse substances can bring about a reaction almost identical clinically and therapeutically But here, as in so many other biologic problems which have to do with that most complex of tissues, the blood, it seems probable that no single factor can be identified as responsible for all the changes which occur, but that a whole train of events is inaugurated when the equilibrium of some of the delicate serum balances is disturbed, all of which tend toward a condition favorable for recovery from infection

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THE TREATMENT OF ARTHRITIS BY THE INTRAVENOUS INJECTION OF FOREIGN PROTEIN *

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AND
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During the past year attention has been called to the value of intravenous typhoid vaccine in the treatment of typhoid fever The early reports by Penna, Kraus and Mazza of Buenos Ayres, and the independent investigation by Ichikawa, demonstrated clearly that by this method of treatment a certain percentage of typhoids might be brought to an immediate termination Kraus and somewhat later Ludke were able to show that similar results could be obtained with a vaccine made from colon bacilli, this showing definitely that the reaction was not due to a specific vaccine Ludke later was able to show that a solution of albumose would accomplish the same results[1]

During the past summer we used the intravenous typhoid vaccine, 200,000,000, in the treatment of typhoid Later, following the suggestion of Ludke, we thought it might be of interest to compare these results with a series treated with albumose We were unable to obtain any of Merck's albumose, but through the courtesy of Drs Jobling and Petersen of Vanderbilt University we secured some proteose which they had prepared for their experimental work By giving from 1 to 2 c c of a 4 per cent solution of this proteose, we obtained the same results as with the typhoid vaccine, 20 per cent of the treated cases terminating by crisis after a single injection In addition, in about an equal number following the injection there was a termination by rapid lysis, and in a third group, which again equaled approximately 20 per cent, following a single injection, the continuous fever was changed to a very irregular type, which continued until the termination of the disease The remaining cases, while reacting with a chill and rise in temperature, continued their febrile course in an uninterrupted manner As stated, the proteose, in its chill, temperature reaction, leukocytosis and percentage of cases in which the course of the disease was modified, gave the same results as the typhoid vaccine

These results are simply confirmatory of those already recorded, making it quite apparent that the sudden termination of the disease is not due to the specific character of the vaccine, but probably to the action of a foreign protein It was decided to apply this method of treatment to another infection, and we selected for this purpose acute, subacute and chronic arthritis In the selection of our material, the patient after entering the hospital was kept in bed for two or three days without special medication for observation as to how much improvement might follow simple rest It was quite surprising to see how many patients with acute arthritis, after two or three days' rest in bed, were so much improved that we did not consider them suitable subjects for testing out the value of a therapeutic agent Selecting, then, only those cases for study in which the disease was of a persistent type, we gave a 4 per cent proteose solution, in doses of 2 c c, intravenously The patient reacted by a chill, rise in temperature and moderate leukocytosis The day following the injection there was a moderate but definite improvement in the joint symptoms

As our supply of proteose was limited, and as we believed that the reaction was due solely to the foreign protein, a typhoid vaccine was substituted for the proteose This vaccine was prepared from the Rawling's strain, killed by heating to 55 C and preserved by 0 5 per cent phenol (carbolic acid) In the preliminary cases a dosage of 150,000,000 was given intravenously The reaction was the same as when the vaccine was given to a typhoid patient except that the leukocytosis was much more marked, in two instances reaching 52,000 Immediately following the injection there was a moderate leukocytosis which increased slightly until the chill, which usually occurred in from five minutes to one hour During, or immediately following the chill, there was a rapid drop in the leukocytic curve, resulting either in a normal count or a leukopenia, followed promptly by a rapidly developing leukocytosis which reached its maximum usually at the end of four and occasionally at the end of twelve hours, gradually returning to normal in from twenty-four to forty-eight hours

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* From the Medical Clinic of Cook County Hospital

[1] For complete references to the literature the reader is referred to the paper by Frederick Gay, Journal of Laboratory and Clinical Medicine, 1915, 1, 13

The degree of leukocytosis was dependent in a measure on the acuteness of the infection Twice in acute arthritis the leukocyte count reached 52,000, while with the subacute forms it rarely passed 25,000 Following the chill there was a profuse sweat which continued for several hours, in three patients a second chill, with slight leukocytosis, from six to seven hours after the injection was recorded When a patient received daily injections there was a gradual lessening in the duration of the chill, and finally the patient failed to react with a chill As an illustration, following the first injection the chill lasted one hour, after the second thirty-five minutes, after the third fifteen minutes, and after the fifth injection rigors did not occur The maximum temperature was reached, not at the time of the chill, but three to five hours after the injection In several instances a leukocytosis occurred without chill, but in none of these was there improvement in the patient's condition In acute arthritis a temperature of 105 was not unusual Subacute arthritis gave a milder reaction When the vaccine was repeated daily with each successive dose the degree of febrile reaction grew progressively less To illustrate, in one case the temperature after the first injection reached 105, after the second 103 4 and after the third 102 Nausea and headache were noted practically constantly after early injections, the headache continuing at times for twenty-four hours The pulse rate during the height of the fever never exceeded 120, and in no instance was there evidence of collapse or serious consequences

Later the dosage was reduced to 75,000,000 With this amount the reactions were possibly slightly less violent, whereas with the proteose the results were definite but not striking, with the typhoid vaccine they were quite as remarkable, as is noted in typhoid patients treated in the same manner and according to our experience much more constant In three of our ten cases of acute articular rheumatism, immediately following a single intravenous injection of 150,000,000, the fever terminated by crisis, the joint tenderness began to disappear, and within from twelve to twenty-four hours the joints were apparently normal In these three cases the results were permanent All of the seven remaining patients were very much benefited following a single injection, but the results were either not permanent, or soreness still remained in some of the affected joints Three or four injections, however, sufficed to relieve all symptoms Some of these patients after treatment remained in the hospital a week or more apparently well After discharge, mild recurrences took place and the patient returned for further treatment We wish to emphasize that in all this series, great relief followed one, or at most two treatments, relapses, however, were frequent Five weeks have now elapsed since some of these patients were discharged, and no relapse has occurred We are, therefore, justified in saying that recovery in some cases following even a single injection is permanent We are now giving all our patients, even if the symptoms all disappear after a single injection, daily injections until four or five have been taken in order to see if relapses can be avoided

Results quite as satisfactory were obtained in six cases of subacute arthritis of from three to nine months' duration These patients all received several injections Here, as in the acute cases, great relief followed a single injection, and after three or four injections had been given, the patient could move his joints with comfort, could dispense with his cane, and in every way the results were most gratifying It is scarcely to be expected if these cases are due to a chronic focus of infection that the results will be permanent We are keeping in touch with these patients, and up to the present time (four weeks) no evidence of marked recurrence has been noted One patient with chronic arthritis of three years' duration received considerable relief after five injections

Results even more striking were noted in cases of chronic gonorrheal arthritis of from two months' to three years' duration One of these patients, who had a wrist involvement of three months' duration with complete disability, recovered apparently completely within forty-eight hours after a single injection, with free movement of the affected joint, and now after a lapse of four weeks there has not been any recurrence The seven other patients in this series all received decided benefit following a single injection, and after repeated treatments (one having received thirteen) the results have been such as to encourage further use of the vaccine None of these patients failed to receive decided benefit On the other hand, two patients with acute gonorrheal arthritis were only moderately benefited

The nature of the reaction effecting these changes, it is difficult to explain That the same process is active here that is responsible for the termination by crisis in typhoid, following intravenous vaccine, is highly probable That the reaction here and also in typhoid is a foreign protein, and not a specific protein, is probable Vaughan has shown that animals immunized to *Bacillus prodigiosus* and *B subtilis* also have a certain degree of immunity to typhoid and cholera He was also able to obtain the same degree of transitory immunity to colon bacilli in animals, by the use of egg albumin, as he had been able to obtain with the products of the colon bacillus In our cases of arthritis, while the joint manifestations might permanently disappear after one or more injections, in case the patient had an endocarditis or pericarditis this would run its usual course (and it was these patients who showed a marked tendency to relapse), or in case of gonorrheal arthritis following the injection the discharge would be temporarily increased rather than diminished This localized immunization recalls to mind Faber's work on joint sensitization in arthritis, and suggests the question whether as a result of the vaccines it was possible the joints might become desensitized That the febrile reaction following injection is not due solely to the foreign protein injected is suggested by the much milder reactions in patients with low degrees of infection Jobling and Petersen suggest that for this reason part of the reaction is probably due to the foreign protein in the bodies of the destroyed bacteria exciting the infection, the destruction being due to mobilization of antibodies While our results with proteose were slight, they were nevertheless definite When the splitting of the protein can be properly adjusted, it is highly probable results similar to those following the typhoid vaccine may be obtained, with possible elimination of that portion of the reaction arising from the injected material

Whether or not further experience will show that this method of treatment is of value as a therapeutic agent, it will at least give further evidence of the nonspecificity of vaccines It does not, however, involve the specificity of vaccines for preventive purposes

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THE VALUE OF ANAPHYLAXIS IN THE TREATMENT OF GONORRHEAL COMPLICATIONS

ALLERGY, A THERAPEUTIC AGENT?*

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Serum therapy in infectious diseases has earned a justly prominent place Passive immunization in diphtheria and tetanus is an established fact Excellent results have been obtained with this form of immunization in epidemic meningitis, although the *Diplococcus intracellularis-meningitidis* elaborates no ectotoxin Less certain immunization therapy, in the nature of bactericidal, bacteriolytic or agglutinative serums, has been accomplished in streptococcic bacteremia, Asiatic cholera, bacillary dysentery, pneumonia and other infectious diseases In gonorrheal complications, such as rheumatism, beneficial results have been obtained with antigonococcic serum, and the assumption is that with the administration of the serum there has been the introduction of specific antibodies

Serum therapy is not limited in its field of usefulness to specific immunity Diphtheria antitoxin has been employed successfully by Noel Paton[1] in various septic conditions He further found the same good results when employing normal horse serum in tuberculosis, arthritis deformans and cerebrospinal meningitis Normal human serum has found a most favorable field in scarlet fever and even in systemic and nervous syphilis Further, Herescu and Strominger,[2] in the exploitation of the meningococcus on grounds of morphologic relationship with the gonococcus, investigated antimeningococcus serum in its effect on gonorrheal complications, with the discovery that most excellent results were obtained in arthritis, ophthalmia, septicemia, ureteropyelitis and meningitis of gonorrheal origin One must be struck by these bizarre findings, and the temptation presents itself to investigate the cause While working with antigonococcic serum in the treatment of gonorrheal complications, my attention was attracted to the fact that the individuals who were markedly affected by anaphylaxis were the ones who responded to the treatment with the serum Furthermore, the severer the manifestations, such as temperature, urticaria, joint pains, etc, the better the result Again, no marked effect was noticeable until these anaphylactic manifestations appeared Lastly, in the absence of the allergic symptoms no effect on the disease, subjectively or objectively, was obtained

This seemed more than a coincidence, and in reverting back to my older records of all such cases, it was evident that the same conditions had obtained in the majority of the cases so treated The following two cases typify what is meant

CASE 1—E B, a printer, aged 22, had had gonorrhea for nine weeks when he developed right-side epididymitis, with all the subjective and objective signs and symptoms typical of that complaint The first, second and third glasses of urine were turbid He was immediately given 15 c c antigonococcic serum intramuscularly, followed by 24 c c the next day There was no change in his condition until six days after the last injection, when he developed a temperature of 101 6, had a generalized urticaria and felt very sick He appeared for examination the second day of his illness with all the soreness in the scrotum gone, the swelling markedly reduced, and the second glass of the two-glass test perfectly clear In two weeks he was completely cured with routine treatment

CASE 2—G A, had had gonorrhea for seven weeks, and presented the usual signs and symptoms of a posterior urethritis He developed a left-side epididymitis three days after coming under my observation, and was immediately given 36 c c antigonococcic serum extending over a period of four days Two days following the last injection, he was taken alarmingly ill with a temperature of 104 dyspnea, general malaise, joint aches, and a violent urticarial eruption These symptoms subsided after the third day, when he reappeared for examination I was astonished to find a complete recovery from the infection, including even the anterior urethritis, all facts having been verified by continued observation for a period of six months

The following case is even more striking in that it gives unimpeachable evidence of the dependency of the beneficial results on the appearance of serum sickness

CASE 3—A R, a salesman, developed epididymitis twelve days after the inception of the urethritis The day following the onset of the complication, he was given 24 c c antigonococcic serum, and 12 c c the next day This was followed in a few hours by acute retention, due probably to swelling of the posterior urethra, necessitating catheterization There was no temperature rise and no perceptible change in the symptoms of the epididymitis After waiting in vain, the average incubation period, nine days, for the appearance of serum sickness, a third injection of 4 c c was given He developed chills thereafter and a slight itching over the body Forthwith the pain in the scrotum abated somewhat and the swelling subsided materially, but there was no change in the appearance of the urine In five days he was again given an injection of 1½ c c serum Within three hours he developed chills, a generalized urticaria, and joint pains Following this there was a total relief of pain and tenderness in the scrotum, and in forty-eight hours after the last injection the scrotum returned to its normal size Coincident with this improvement, the posterior urethritis disappeared and the second glass in the two-glass test cleared perfectly In the space of three weeks there was complete recovery from the urethritis, with the employment of the usual forms of medication

It is important to note that during the course of serum injections no local or other treatment was employed

With the result of these representative cases in mind, it appeared that whatever effect was produced by the serum was not directly attributable to any true antitoxic or antibacterial elements embodied in the serum, because it in no way resembled the immediate action of diphtheria antitoxin or other antiserum Was it possible that the beneficial results obtained were in reality due to anaphylaxis, or were they favorable phenomena that accompanied the unfavorable allergic symptoms? Could the rise in temperature exert a destructive effect on the gonococcus? It is believed that owing to the high point of temperature equilibrium in the pigeon, for example, a protective influence against infection exists Again, the gonococcus can not withstand high temperature These questions cannot at present be answered, but are still being investigated

To prove that other factors than antibacterial of the specific serum played an important, if not the most important, part was easy Normal horse serum was substituted for antigonococcic serum The following records will show that there was no result obtained with the antigonococcic serum which was not equally well effected with normal horse serum To place the experiment on the same basis throughout, all serums were obtained from the same firm

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* Read before Douglas Park Branch Chicago Medical Society, Feb 15, 1916

[1] Paton, Noel Australasian Med Gaz, 1910, xxix, 601

[2] Herescu and Strominger Verhandl d deutsch Gesellsch f Urol, 1913 and 1914, iv, 102

CASE 4—E C, of the hospital service of Dr Stillians, had developed signs and symptoms of acute epididymitis one month after the onset of the urethritis, and had had no treatment therefor Nine days after the onset of the complication the symptoms were still acute He was then given 10 c c normal horse serum In twenty minutes he became markedly dyspneic, developed swelling of the eyelids, and was in great distress The temperature and pulse were normal These symptoms subsided within an hour Two days later he developed an urticaria, with no temperature rise, and coincident with this all pain, tenderness and swelling of the scrotum disappeared The posterior urethritis cleared completely The patient then passed from observation

This case was rather striking in the rapid onset of anaphylaxis after one injection of serum, with the rapid improvement in the patient's condition Upon inquiry it was learned that he had never before received serums, but was a hostler by occupation, thus accounting for his idiosyncrasy to horse serum

CASE 5—S D, had acute epididymitis on the left side, which had developed two months after the onset of the urethritis Two days later he was given 5 c c normal horse serum, which in turn was followed by 8 and 9 c.c on the two subsequent days Two days after the last injection he developed a generalized urticaria and pruritus There was no temperature rise or other ill effects Upon this day the pain and swelling of the scrotum almost entirely disappeared, as did the posterior urethritis While continuing treatment for the anterior urethritis, along with prostatic massage, he developed an epididymitis on the opposite side two weeks after the healing of the side first affected This was preceded by the redevelopment of the posterior urethritis With caution he was given 1 c c normal horse serum, and in the absence of any ill effects, this was followed by 2 c.c, and this in turn by 5 c c on three consecutive days Slight erythema and pruritus developed after this course, with coincident subsidence of all scrotal disturbance, including a disappearance of the posterior urethritis In two weeks complete recovery was secured

If the serum really provoked or stimulated the formation of antibodies, the concentration of the latter was such as not to afford immunity or protection, after the first administration series, against the involvement of the opposite side, or perhaps the protection was too ephemeral

CASE 6—W A S had gonorrhea of ten weeks' duration, in which time he developed two urethral fistulas and a paraphimosis, and then a right-side epididymitis On the first day of the last complication he was given 10 c c normal horse serum, the second day 12 c c. and the third day 10 c.c There was no change in his condition until six days after the last injection, when he developed hypogastric colic and a slight eruption over the buttocks When seen at this time, the posterior urethritis had resolved and the scrotal condition had improved In three days there was a slight relapse, with recurrence of the posterior urethritis and scrotal tenderness, but upon administration of 4 c c normal horse serum the condition again resolved within twenty-four hours A second relapse occurred in three weeks, whereupon 4 c.c. horse serum were again administered, followed again in twenty-four hours by a clearing up of the posterior urethritis and epididymitis At this stage the patient left town and passed from observation

A review of this case brings to light the interesting data of repeated relapses and improvements, the latter following closely on the administration of small doses of serum The allergic reaction was but slight after the first series, and also after the other injections, yet the change in the patient's condition was marked in each instance

CASE 7—J B had gonorrhea one month when he contracted right-side epididymitis On the first day of the complication he was given 8 c c., on the second, 7 c c, and on the third day, 5 c c normal horse serum Six days following the last injection he broke out into generalized urticaria, with temperature of 100 8, but coincident with that all tenderness in the scrotum disappeared In five days, however, he developed gonorrheal rheumatism in the left knee, with a recurrence of the posterior urethritis, but no more serum was administered Complete recovery was obtained, however, in a month

In this case the effect of the serum, though temporary, nevertheless affirms the corelation of allergic symptoms and improvement

CASE 8—J H had posterior urethritis twenty days, when he developed right-side epididymitis On the second day of the complication he was given 10 c c normal horse serum, and this dose was repeated on the two days following Five days after the last injection an urticarial eruption appeared, and he had a temperature of 101 8 Twenty-four hours later all pain disappeared and the scrotal swelling receded markedly The urine was almost cleared in both glasses, with the exception of threads in the first Within three weeks, with ordinary treatment, including prostatic massage, the patient was discharged as cured

The relation of serum sickness to improvement in this case is so apparent as to require no comment

CASE 9—H F developed a posterior urethritis three months after the appearance of the initial discharge He was given 10 c c normal horse serum, followed the next day with 8 c c of the serum of the patient in Case 6, the latter's blood being withdrawn at the stage of recovery from the first relapse Within eight hours of this dose the urgent symptoms of the posterior urethritis were ameliorated Four days later 2 c c normal horse serum were given This was followed in two days by a florid generalized urticarial eruption, with a temperature of 101.2 Coincident with this reaction, all signs and symptoms of posterior urethritis ceased The second glass of urine completely cleared, while the first was but slightly turbid Pus in the prostate was still abundant, however

In this case the effect of the serum from a convalescent case was very noticeable within a few hours That the influence was not more marked may be attributed to the fact that the donor was not putting up much resistance to the disease, as was evidenced by several relapses, and the protective substances provoked in his blood were insufficient in power or number or both It must be noted, also, that the allergic reaction in this instance was slight The change in the receptor's condition was nevertheless marked The effect of the serum sickness in this patient is noteworthy, for the reason that even with the employment of antigonococcic serum, acute posterior urethritis is usually not benefited

CASE 10—W H Mc, a medical student, developed acute epididymitis one month after the onset of gonorrhea He was then given 8 c c of normal horse serum The next day he developed chills, headache, temperature of 102, and a florid generalized urticarial eruption The day after the onset of these symptoms the urgency of urination began to subside as did the pain in his scrotum The temperature persisted for four days, but then the tenderness and swelling had completely disappeared, the second glass of urine was clear The prostate showed very few pus cells

This case resembled Case 4 somewhat, in that allergy was aroused by one injection of serum, although more delayed It happens that this student is a farmer during vacation In that light his association with horses may explain his susceptibility to horse serum

Case 11—Patient of Dr M S Oliver developed acute posterior urethritis with edema and retention on the fifteenth day of his gonorrhea On the eighteenth day he developed arthritis in the left tarsometatarsal joints and also in the left knee On the twentieth day 10 c c normal horse serum were administered On the twenty-first day a second injection of 10 c c was given, and on the twenty-second day a third 10 c c On the twenty-third day the right knee and ankle became involved This patient had had similar complications with an attack of *gonorrhea two years before, and antigonococcic* serum injections had been of no avail On the thirty-sixth day, in the absence of any serum reaction and any change in his *condition*, 3 c c serum were given In six hours he developed a rash on his face and body, and there was increased pain in the affected joints, but no temperature rise On the thirty-seventh day the joints felt better, but the urine was still cloudy in both glasses On the thirty-eighth day 1 c c horse serum was given and again a rash appeared with increased joint pain, but without temperature rise The thirty-ninth day found the patient with joint pains alleviated and the second glass of urine perfectly clear On the fortieth day 2 c c serum were injected, without provoking eruption or temperature, but causing joint pain, with extension to the finger and shoulder joints The urine remained clear Within a week all joint trouble disappeared, and the urine was still clear

This case is of interest for two reasons first, because of the prolonged period over which the serum was administered without any serious effects, and second, because of the favorable influence exerted by the *serum the days following the injections after the slight* allergic reactions

A summary of these cases discloses the facts that normal horse serum can entirely replace the antigonococcic serum, the content of specific bactericidal properties of which is questionable As a matter of fact, in view of recent work by Warden,[3] it appears doubtful that there are contained any antigonococcic properties in the serum, since in reality merely the metabolic products of the readily autolyzed gonococcus are injected into the horse in the preparation of the specific serum To what factor we can attribute the beneficial results of normal horse serum, we cannot definitely state That allergic phenomena play a rôle seems evident, since the best results were obtained at the time of the onset of serum sickness, and the greater the reaction the better the result An attempt at explanation of this factor leads into the depths of the study of the nature of anaphylaxis It is possible that certain elements in the serum itself exert a favorable influence This has been found true, as before mentioned, in other infectious diseases, in which, too, the blood of convalescents has proved of great value A suggestion of this influence was noticed in the patient of Case 9

As investigation along this line is still being conducted, we can at this time offer nothing more than evidence sufficient to favor normal horse serum in place of antigonococcic serum, whose value as a specific is questionable If allergy is in reality of therapeutic value, its employment is nevertheless hazardous It is a question whether any gonorrheal complication requires the use of such heroic treatment Safety cannot be sacrificed for speed

25 East Washington Street

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[3] Warden, C C Vaccine Treatment of Gonorrhea, The Journal A M A, Dec 11, 1915, p 2080

A STUDY ON FOOD

AND THE FUEL VALUE OF THE DIETARY AT THE NEW YORK CITY MUNICIPAL SANATORIUM

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NEW YORK

The dietary question is fraught with many difficulties in an institution for the treatment of tuberculosis, and is a problem which is never entirely solved Just when the responsible party is congratulating himself on a satisfactory, as well as an economical solution of the proposition, trouble appears from the most unexpected sources, varying from a bug in the cereal to a jump in the cost per capita During recent years the consensus of opinion has changed from superalimentation in tuberculosis to the more rational procedure of feeding three generous meals a day, with extra diets only when indicated by poor appetite at the meal periods, accompanied by a markedly substandard or steady loss of weight Some patients with poor appetites will eat as much as usual during meal periods, even if given extra between-meal diets, and when the nourishment is required and well borne, its administration is indicated However, if the total caloric intake is not increased, the extra diets should be discontinued

It has been pointed out by competent observers, notably by King and Bardswell and Chapman, that the strain of forced feeding on the organs of assimilation and elimination is so great that it becomes a source of danger rather than benefit in many cases, and its use should be the exception rather than the rule While this is generally true, I have observed many patients who were capable of assimilating enormous quantities of nourishment without any apparent primary or secondary deleterious effects on their organisms I believe, however, that conservatism should play a large part in the feeding of the tuberculous, and as the disease generally persists for a long period, the gastrointestinal tract and kidneys should be spared all extra strain, if they are to be expected to continue a successful struggle after the first acute onset of the disease has been overcome The patient who emerges from the preliminary fighting with a damaged gastro-intestinal tract is in an unfortunate position, with poor prospects of becoming a comfort to himself or a permanently self-sustaining member of the community His chances for an early exacerbation are excellent, *and* for final recovery, to say the least, are compromised It seems only rational that the stomach should have a maximum amount of rest after a heavy meal, and for this reason alone the routine administration of milk and egg diets between meals would seem to be strongly contraindicated In this connection, I should like to mention Dr E S McSweeny's interesting studies at Otisville in 1908, for they are very convincing, and established the point just made as applied to patients in the Municipal Sanatorium At that time reports from other institutions[1] indicated a number of objections to forced feeding, but it was felt that possibly some of these reasons did not necessarily apply at Otisville, where all afebrile patients are compelled to do a certain amount of work

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[1] Newton, R C The Diet and Regime in Vogue in Thirty Four Tuberculosis Sanatoria, Proc Sixth Internat Cong, Part 2

McSweeny's experiment was as follows

Two groups of patients were selected Group 1 was allowed milk and eggs in addition to the three meals, while Group 2 received only three regular meals daily It was found that the patients in Group 2 (those who ate only three regular meals) averaged larger weight increases than those in Group 1 It was decided to discontinue the milk and egg diets that had been administered as a routine morning and afternoon since the institution was opened, and to depend on the regular meals in all but exceptional cases This policy was proved, by later experience, to be sound, and has been continued to date

A study of the caloric content of our dietary was carried out at the Women's Unit in 1910, but the results were not published The work was resumed two years ago and, owing to the paucity in the literature of studies in connection with the dietaries of tuberculosis institutions, it was decided to publish our results with the hope that such a step would promote discussion and criticism along this line It was felt that so important a function as the dietary, which is one of the fundamentals of sanatorium treatment, deserves more comprehensive and collective study than it has received in the past, and that an exchange of ideas by the various workers in tuberculosis institutions is particularly desirable, for such an exchange will not only tend to lead to economy in administration, but will eventually provide a scientific basis on which to construct the future dietaries Dettweiler said, "My kitchen is my pharmacy," and Osler[2] is quoted as follows "As a healing of tuberculous process is largely dependent upon the state of nutrition, the question of diet becomes of the very first importance"

In spite of the fact that the dietary has been recognized for many years to be of prime importance, one finds but few studies, by men in this country, of a character that deserve more than passing attention It seems deplorable that so little effort has been expended in this field during the past eight or ten years while the tremendous activities in connection with other phases of the tuberculosis problem have been in progress Nothing tends to conserve the provision supply to such an extent as an active interest in the actual amount by weight of food consumption and food waste

The aim of those in control of institutional dietaries should be (1) to supply the food needs of the patients as economically as is consistent with the quantity, quality and service required for the treatment of the disease from which the patients suffer, (2) to avoid too frequent repetition of any particular foodstuff, and (3) to keep a close check on the amount of plate, general table, kitchen and ice box waste When our dietary studies were resumed in 1914, we were guided by these principles

The most costly item of the dietary is meat, and this was our first point of attack It was found that egg breakfasts were entirely satisfactory to the patients, therefore eggs were served in various styles for from four to five of the morning meals each week Steak and chop breakfasts were entirely eliminated, and other meat orders were gradually cut down to the minimum The per capita per diem consumption of meats and fish fell from an average of 19 9 to 14 5 ounces during the course of six months The eggs which are used for cooking purposes at the Municipal Sanatorium are of cold storage variety (fresh gathered extra), and are contracted for (1915) at from 25 5 to 26 cents per dozen These are recandled after delivery to the institution The substitutions above referred to and the routine serving of small initial meat orders, which cuts down the plate waste of those who have small appetites, but who, on general principles, take a large slice of meat when it is immediately available, accomplished the reduction in meat consumption and was mainly responsible for lowering our cost per capita for foods from 42 cents for the first nine months of 1913 to 37 + cents for the same period in 1914 (Table 1) Care was taken to keep the average number of calories up to a reasonable standard, and that this was satisfactorily accomplished is indicated by the fact that our patient weight reports continued to be entirely satisfactory

TABLE 1—SAVINGS FOLLOWING SUBSTITUTION OF EGGS FOR MEATS AT BREAKFASTS COVERING A PERIOD OF FOUR WEEKS

No of Meals	Variety of Food	Per Meal	Total	Price cts (1914)	Cost
8	Steak	260 lbs	2 080 lbs	20 per lb	$416 00
8	Chops loin	145 lbs	1 160 lbs	19.3 per lb	223 83
	Chops rib	125 lbs	1 000 lbs	10 per lb	100 00
Total for meat					$739.83
16	Eggs	80 doz	1,280 doz	23 6 per doz	302 03
Total savings for period of four weeks					$437 80

We have felt for several years that it is not only entirely unnecessary, but also undesirable to serve meat and eggs at every meal, in fact, in 1910 meat and eggs were eliminated from the breakfasts at the women's unit for several weeks During this time the weight increases and general physical condition of the patients were entirely satisfactory In September, 1915, after an explanatory talk with the patients at the women's unit, it was decided to substitute 8 ounces of milk per capita for eggs on four mornings in the week, and this has not only proved to be a satisfactory change, but has, in addition, resulted in a weekly saving of 11 3 cents per patient per week

TABLE 2—COMPARATIVE FOOD VALUE AND COST OF MILK AND EGGS

		Protein	Fat	Carbohydrate	Total Calories	Cost per Capita per Diem
Eggs 2 per portion	Grams	18 50	10.54			(Eggs 26 cts per dozen) 4.33 cts
	Calories	55 81	105 46		161	
Milk ½ pt per portion	Grams	7 48	9 08	11 34		(Milk at 6 cts per qt) 1 5 cts
	Calories	30 66	84 44	46 49	162	

Saving per capita per diem when milk is substituted 2.83 cents

Table 2 demonstrates that by substituting milk for eggs it is possible to save $16 41 a day in an institution of 580 beds (the capacity of the Municipal Sanatorium) without changing the caloric value of the dietary If this substitution was made on four mornings each week, the annual saving would be approximately $3,500 Another factor of importance in connection with the substitution of milk is that good milk is easily procurable (at least in this vicinity) at 5 5 cents a quart at all seasons, while satisfactory eggs are very often unobtainable, in sufficient quantities, at any price A further result was an increased consumption of cereal, which we feel is particularly desirable and which has practically no effect on the cost per capita The breakfast menu on the four days referred to consists of milk, 16 ounces, a good variety of hot cereal and rolls, butter, coffee, and occasionally fruit

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[2] Friedenwald and Ruhräh Diet in Health and Disease

A factor worthy of mention in connection with the utilization of our meats, which applies more especially to the women's unit, is the large children census We have seventy-two children, between the ages of 5 and 14 years, and all of the meat which cannot be served to adults in the form of slices is cut up into small pieces and served to our juveniles Table 3 represents the amount of carving waste which is eliminated by this procedure, and demonstrates to some extent the advantage, from the standpoint of economy, of treating small children in institutions with adults

TABLE 3—COMPARISON OF CARVING WASTE AT MALE AND FEMALE UNITS, NOV 1 to 7, 1915

Variety	Male Unit		Female Unit	
	Amount Received from Storehouse, Pounds	Carving Waste, Pounds	Amount Received from Storehouse, Pounds	Carving Waste, Pounds
Roast beef	167	14	96¾	1½
Corned beef	203	44½	95	12½
Roast lamb	182	19	94½	5
Pot roast	164¼	27	99½	2½
Boiled ham	138½	33½	63	13

Much of the roast meat which is close to the bone and which is of fine quality is available for this use The utilization of "left overs," which are bound to be ever with those who serve large numbers of persons, is a hard problem to handle in a state, county or municipal tuberculosis institution, where the stay is for a comparatively long period and where those who are catered to are posessed of their normal amount of gray matter, in addition to a highly specialized sense of their rights as citizens and former tax payers Many economical and delectable dishes of high food value which are prepared from "left overs" and which are eaten with relish in most well to do households are scouted by a large majority of the patients Those culinary connoisseurs have very definite ideas on the subject of dietetics, and as their forcefully expressed likes and dislikes are the governing factors in the formation of the institutional menu, it behooves the food purveyor to watch that infallible barometer, the garbage can, with ever increasing interest, and to catch the rumblings of any approaching storm from the distance This precaution often saves the situation before any real serious developments occur, and, besides, keeps the responsible party in a continual state of preparedness In our experience, hash has always been mistrusted in spite of the excellence of its ingredients, and it became necessary for us to discontinue it over two years ago, after our unsuccessful efforts to please with various "hashy" combinations had been paraded before the Board of Estimate through the agency of a former patient The patients gave abundant evidences that they would not eat it, and although the "hash meal" was an economy, it was felt that it did little to further the results of treatment, so it was stricken from the menu It is easy to carry economy too far in the planning of an institutional dietary It is also necessary to bear in mind the fact that the physical well being of the patients is of first importance, and that no one thing tends to cause more dissatisfaction among the patients than an unsatisfactory menu

The most reliable criterion for checking up the adequacy and esthetic qualities of the dietary is a computation of the actual food consumption and its value in calories, combined with a careful per capita study of the plate waste If the number of calories is up to the standard, the food waste low and there has been a dearth of justifiable complaints, the person or persons responsible for the dietary can rest assured that all is well

TABLE 4—PER CAPITA CONSUMPTION OF FOODS AT BOTH UNITS AMONG THE VARIOUS CLASSES OF PATIENTS

	Adults				Children					
	Men	%	Women	%	Boys 9-15 Yrs	%	Girls 5-9 Yrs	%	Girls 10-14 Yrs	%
Protein (grams)	127 2		107 4		105.5		84.9		91 9	
Fat (grams)	154 5		121.8		129		99 3		102 3	
Carbohydrates (grams)	425 7		288 9		413.88		254 4		267	
Protein (calories)	521	14	440	16	432	13	348	15	376	15 5
Fat (calories)	1 436	39	1 132	41	1,199	36	923	40	951	39 5
Carbohydrates (calories)	1 745	47	1,184	43	1 696	51	1 043	45	1,094	45
Average calories per diem	3 700+		2,750+		3,300+		2,300+		2,400+	
Average number calories per pound of body weight	27		28		43 5		33.8		34 5	

Calories for male and female adults combined, 3,200

Table 4 presents one of our dietary studies In Table 5 are given King's and Bardswell and Chapman's diets It will be seen that our protein content is considerably lower than Bardswell and Chapman's, and slightly lower than King's, the fats are lower than Bardswell and Chapman's, and higher than King's, and the corbohydrates about equal to King's, while much higher than Bardswell and Chapman's Our dietary, however, is giving excellent satisfaction with a minimum of gastro-intestinal disturbances, and the comparative results tend to show that no trouble may be expected so long as the protein, fat and carbohydrate content of a dietary is kept within certain bounds

TABLE 5—KING'S AND BARDSWELL AND CHAPMAN'S DIETS

	King's Standard Diet Annex,* Grams	Bardswell and Chapman's Standard Diet,† Grams
Protein	131	144
Fats	113	160
Carbohydrates	385	270
Calories	3,166	3,180

* King The Construction of an Economic and Efficient Diet in Tuberculosis Tr Nat Assn S and P Tuberc, 1909

† Bardswell, N D and Chapman, J E Diets in Tuberculosis New York, Oxford University Press, 1908

It has been stated that children require 80 calories per kilogram (36 calories per pound) of body weight, and adults, moderately active, from 35 to 40 calories per kilogram (16 to 18 + calories per pound) of body weight[3]

Rubner's figures for a man of 65 kg (140 pounds) are given in Table 6

TABLE 6—RUBNER'S FIGURES FOR A MAN OF 140 POUNDS

	Total Calories	Calories per Kg of Body Weight	Calories per Lb of Body Weight
During rest in bed	1,800	28	13
In repose	2 100	32	14½
Light work	2 300	33	15
Moderate work	2 600	40	18+
Hard work	3 100	48	22

Our average for men, 26 calories per pound of body weight, is well above the figures given for men at hard work, and the average for women about equal to it The male children consume far above the average calories per pound as given by Pattee, and the female children slightly less than her figures It would seem as if from 3,100 to 3,200 calories is about the normal average for the mixed sexes in tuberculosis institutions, as our food consumption was controlled entirely by the appetites of the various patients, and I presume that such was the case in the other institutions mentioned above

If this premise is true, then the ability of the various patient groups to select the amount and variety of food necessary to yield what is considered to be the proper number of calories from entirely different dietaries is remarkable, and confirms the experiences of other observers in this field In contrast to these figures, the reader may be interested to learn that Fisher gives 300 calories as a hypothetic figure for the amount of protein needed in the diet of the tuberculous or, as he states, 50 per cent more than is required for a healthy man In answers to a questionnaire which he sent to fourteen tuberculosis institutions in this country and abroad, it was found that the number of calories furnished by the various dietaries varied from 410 to 1,200 for protein, from 750 to 2,200 for fat, and from 560 to 2,100 for carbohydrates In thirteen institutions the number of calories of protein exceeded 500, in thirteen the number of calories of carbohydrates exceeded 1,100, and in twelve the fats ranged from 1,100 calories up The calories varied from 2,400 to 5,500 in all, ten institutions averaging 3,500 calories and up[4]

CALORIES PER POUND OF BODY WEIGHT

As might be expected, the number of calories consumed per pound of body weight was found to be much greater in children than in adults, but we were surprised by the marked excess of calories consumed by the group of male children between the ages of 9 and 14 years over the female group of the same ages, which amounted to 10 calories per pound of body weight The average gain in weight, however, was 1¼ pound for the female group and 73/100 for the male group This may be accounted for by the greater activity of the boys, although one would think that the excess of calories consumed by them should be sufficient to neutralize the effect of this activity to some extent A study of the weight records of the male and female units covering four years is of interest in connection with the foregoing These units are separate institutions so far as the records are concerned, and our opportunity for watching the weight increments of the two sexes is peculiarly favorable It will be seen that our records prove conclusively that the capacity for accumulating weight is markedly in favor of the females in spite of the monthly menstrual drain, and is enough to lead us to believe that it is a characteristic of the female sex I believe it is the general opinion that males gain more on the average than females, and our studies have shown that the consumption of calories per pound of body weight by males is in excess of that of the female sex 27 calories per pound for men and 24 for women In spite of the greater tissue bulk in males with the capacity for greater food consumption, our results prove that females gain the most weight

REPETITION OF FOODSTUFFS

Care in the avoidance of repetition has been the saving grace of many splendid culinary combinations No matter how infatuated patients may be with a certain foodstuff, if it is served too frequently their ardor will soon wane, and a good thing is lost to the menu Much of the monotony of the institutional dietary is due to repetition, and the fact that the menu is not so varied as to prevent patients from making a fair guess as to what they will receive at a certain meal on a certain day With this in mind, about two years ago, we constructed a four weeks' menu which covered all of the foodstuffs available on our yearly contract During the late spring, summer and early fall months, we have an abundance of green vegetables from our garden, and these are added to our menu as they are produced We have from one to two vegetables besides potatoes for dinner and supper For the first four weeks of operation the menu starts with the first week and ends with the fourth, for the second four weeks it commences with the second and ends with the first week, for the third four weeks, it begins with the third week and ends with the second, etc This arrangement makes it practically impossible for any patient to surmise what food is to be served at any time Moreover, the plan facilitates the ordering of supplies, and enables one to work out a daily ration with very little difficulty

TABLE 7—WEIGHT

		Average Increase of Those Gaining Pounds	Gained		Lost	
			Number	Per Cent	Number	Per Cent
1912	Male unit	7 15	419	80 11	104	19.89
	Female unit	12.23	276	91.39	26	8 61
1913	Male unit (adults)	9.84	357	83 02	78	16.98
	Male unit (children)	5.21	48	97 96	1	2 04
	Female unit (adults)	13 48	228	87 36	33	12 64
	Female unit (children)	10 03	106	96.36	4	3 64
1914	Male unit (adults)	9 46	305	78 41	84	21.59
	Male unit (children)	7.20	39	97 50	1	2 50
	Female unit (adults)	10 71	200	83 68	39	16 32
	Female unit (children)	10 25	104	96 30	4	3 70
1915	Male unit (adults)	10 62	350	85.37	60	14 63
	Male unit (children)	9 48	36	97 30	1	2 70
	Female unit (adults)	11 69	232	85 29	40	14 70
	Female unit (children)	11 49	70	97.22	2	2 78

Our experience has taught us that it is good judgment to stop for a while, at least, any particular combination that the patients begin to tire of A good illustration of the evil of repetition is our experience with codfish balls at the men's unit several years ago, where it had been customary to serve them about four times each month It is a cheap meal, and was appreciated by the patients for a time, but they finally developed a marked aversion to salt cod, and on one occasion a few outraged "citizens" waylaid a whole meal of carefully prepared uncooked codfish balls and threw them into the refuse pail The miscreants were apprehended and punished, but nevertheless the hint was taken and salt codfish did not appear on our menu again for a considerable period It is now alternated with other salt fish and is appreciated

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[3] Pattee Alida Frances Practical Dietetics with Reference to Diet in Disease Mount Vernon N Y A F Pattee 1910

[4] Fisher Irving Proc Sixth Internat. Cong Tuberc. i Part 2

PLATE WASTE

The work reported by Wright on plate waste is of value to those employed in insane hospitals, but of practically no use to workers in tuberculosis institutions It is to be expected that the per capita waste will be greater in a tuberculosis institution than in an institution for the care of insane or in an acute hospital, owing to the fact that much larger quantities of food, a great deal of which is especially rich in wastage, is served to the tuberculous Meats furnish an especially large amount of waste, owing to the comparatively large percentage of uneatable portions, such as gristle, fibers, small bones, etc, and this food forms a conspicuous part of the dietary of the sanatorium We have no means of checking up our waste with that of other institutions for the treatment of tuberculosis, as our review of the literature has failed to reveal any studies on this problem We feel that periodic studies of the per capita food wastage will do much to stimulate those in charge of the dietary to further efforts toward economy, and are sure that the result of food waste studies by the various large sanatoriums would be of great service to all Our dietitians are instructed to serve as much of any particular food as a patient desires to eat, but to reduce useless waste to a minimum by serving it in small portions This rule has proved to be satisfactory to the patients, and is bound to effect economy of foodstuffs

TABLE 8—AVERAGE PERCENTAGE OF MEAT CONSUMPTION AND SHRINKAGE

Meat	Consumption, Per Cent	Shrinkage and Wastage, Per Cent
Roast beef	36 to 39	64 to 61
Pot roast	28+	71+
Beef steak sirloin	25 5	74 5
Roast lamb	29 5	70 5
Lamb chops	31	69
Liver	44 5	55 5
Roast chicken	26	74
Bacon, fried	30 5	69 5
Salt pork	54	46

Our average per capita per diem waste of solid foods is for male adults, 45/100 pound, for boys from 9 to 15, 27/100 pound, for females, entire dining hall, 41/100 pound, and for female children, 335/1000 pound It is noticeable from this that children "clean their plates" much better than adults, although the smaller amounts served accounts for a part of this

In connection with our plate waste studies we carried on investigations covering the shrinkage in meats, which were followed up from the time the meat was cut from the side of the carcass until the remnants were accounted for as plate waste

The following headings used in our tables illustrate the method of procedure

Date
Varieties of meat
Amount received from storehouse, including butchering waste, pounds
Kitchen trimmings, pounds
Weight before cooking, pounds
Shrinkage, pounds
Plate waste, pounds
Surplus, pounds
Amount consumed, pounds
Percentage of consumption

We found that the percentages given in Table 8 represented the average percentage of meat consumption and shrinkage (including wastage) These percentages of consumption seem to be absurdly low, but when we consider the butchering waste, the large amounts of water and fat which are eliminated by the cooking, and the weight of the bones, fiber and gristle, which appears as plate waste, the figures assume more reasonable proportions

TABLE 9—FORM OF TABLE FOR COMPUTATION OF DAILY CALORIES AND FOOD WASTE *

Date									
Menu for Day	Pounds Eaten	Chemical Composition			Number of Pounds Eaten			Plate Waste	Space Used for Computing Number of Calories
		% P	% F	% C	P	F	C		
Column for various foods		Percentage not totaled			These four columns are totaled				
Total No of pounds									

* *Abbreviations P, protein F, fat, C carbohydrate*

Method of procedure for computing number of calories in dietary

Number of pounds of protein plus number of pounds of carbohydrate × 1,820 (number of calories in 1 pound of protein or carbohydrate) = total number of calories of protein and carbohydrate

Number of pounds of fat × 4,080 (number of calories in 1 pound of fat) = total number of calories of fat

Total number of calories of protein and carbohydrate plus total number of calories of fat = total calories consumed for day

Total calories consumed for day ÷ number of persons served = average calories per patient per day

Total pounds of plate waste ÷ number of persons served = average per capita plate waste per day

ROUTINE FOR DETERMINING THE CALORIC VALUE OF FOOD

Our routine for determining the caloric value of the food served, which is similar to that in general use, except that we do not use the metric system, follows

The various classes of foods are weighed separately before service After the meal is finished all of the foods which are suitable for future use (such as meats on the platters, etc), are weighed separately and the weights deducted from the original amounts The foods which are left as "plate waste" are now separated out and placed in marked containers (one for each article), which are weighed individually The original amount served minus the "left overs" minus the "plate waste" equals the actual amount of food consumed It is, of course, necessary to determine the percentage of protein, fat and carbohydrate in each combination of foodstuffs served, and this is very easily accomplished as tables are available which cover almost every possible ingredient The amount of protein, fat and carbohydrate is determined by multiplying the number of pounds of each foodstuff on the daily menu by its percentage of protein, fat and carbohydrate, and totaling the three separately The total number of calories for the day is obtained by multiplying the number of pounds of protein and carbohydrate consumed by 1,820, as both of these have the same caloric value, and the number of pounds of fat by 4,080 The results are then added and the sum represents the number of calories consumed The total number of calories, divided by the number of persons served for the day, gives the average number of calories consumed per person Table 9 is used at Otisville for the computation of the daily calories and food waste The calories are figured out for each meal and then totaled

CONCLUSIONS

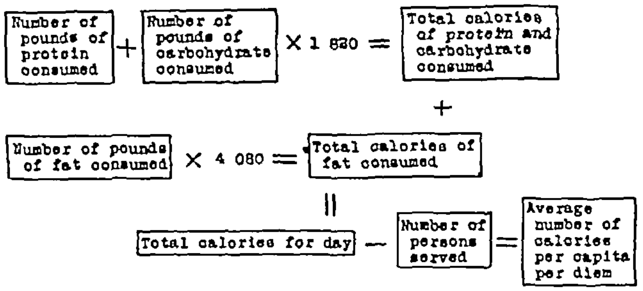
1 In all institutions for the care of the tuberculous, food studies, including the caloric content of the dietary and food waste, should be carried on at regular intervals, preferably for one week or more during the various seasons of the year, and these records should be made available for comparative purposes

2 Special training, though advisable, is not a necessary requisite for the carrying out of a successful dietary study in an institution It is, of course, essential that the doctor who directs the work should be thoroughly familiar with the problem It is only necessary that the person or persons who are doing the work should be intelligent, careful and willing to follow conscientiously the "rules of the game"

3 The elimination of meats and eggs from the morning meal and the substitution of milk is a sound and justifiable economy

4 The dietary of the tuberculous should be high in caloric value, but confined to three daily meals in all but exceptional cases

5 Males consume more food than females, both in total amount and in number of calories per pound of body weight, but in spite of this fact, females make much larger gains than males, enough so as to indicate that rapid accumulation of weight is a characteristic of the female sex


Number of pounds of protein consumed
+
Number of pounds of carbohydrate consumed
X 1 820 =
Total calories of protein and carbohydrate consumed
+
Number of pounds of fat consumed
X 4 080 =
Total calories of fat consumed
=
Total calories for day
—
Number of persons served
=
Average number of calories per capita per diem

Diagrammatic scheme for computing the caloric content of a dietary Pounds are converted into grams by multiplying by 453 5925

6 The avoidance of frequent repetition of foodstuffs is very important

7 A four weeks' menu, when used as suggested, is of great aid to those controlling the dietary, and tends to do away with repetition

8 The treatment of small children, in separate units, in institutions with adults, is both feasible and advantageous in that it results in economy of foodstuffs

9 Small initial servings with as many "seconds" as may be desired is satisfactory to the patients and prevents much plate waste

10 The plate waste in institutions for the tuberculous is of necessity higher than in hospitals for the insane or in general hospitals

Much credit is due to Miss Marguerite Brady, who has been in charge of the dietary work at the male unit since the work was started and to Miss Carlotta Nellis, Miss Beatrice Cummings and Mrs Catherine Stoltzenberg, who served in turn as dietitians at the female unit We wish to express our thanks to Dr Herbert M King for his assistance, to Graham Lusk for reviewing the results of our work, and to Miss Charlotte Strickland of Loomis Sanatorium for many useful suggestions

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Necessity of Cultivation —Cultivation is as necessary to the mind as food to the body —Cicero

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VARIATIONS IN RENAL FUNCTION DEPENDENT ON SURGICAL PROCEDURES *

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This report is based on the investigation of changes in renal function produced by operations performed under general anesthesia, and of the variations in renal activity dependent on relief from back-pressure of urine For this work, the rate of excretion of phenolsulphonephthalein and the concentration of urea in the blood have been taken as the indexes of renal activity These tests were chosen because of their recognized value and because they are so easily performed The phenolsulphonephthalein test was carried out by the technic of Rowntree and Geraghty[1] The determination of the urea concentration in the blood was made by the urease method introduced by Marshall[2] The concentration of total nonprotein nitrogen in the blood is probably a better index of renal efficiency, but the urea determination is made with less difficulty and can easily be made a routine clinical procedure It is true that the proportion of urea nitrogen in the total nonprotein nitrogen varies considerably, but usually it forms from 50 to 70 per cent of the nonprotein nitrogen, the percentages increasing with the total nitrogen retention This has been shown by Folin and Denis,[3] Foster,[4] Christian, Frothingham, O'Hare and Woods[5] and others In infants the urea nitrogen percentage is appreciably lower as a rule, according to the results obtained by Schlutz and Pettibone[6] But on the whole the concentration of the urea in the blood may be taken as a fair index of renal function

Although the question as to the agreement of phenolsulphonephthalein and blood urea tests is beyond the scope of this paper, still Table 1, giving the results of these two tests performed simultaneously on the same patient, is of considerable interest

Throughout these tables blood urea concentration is reported in milligrams of urea per hundred c c of blood Of the phenolsulphonephthalein figures, the first represents the time in minutes elapsing between the injection of the substance intramuscularly and its appearance in the urine, the second figure is the percentage excretion in the first hour after appearance in the urine, and the third figure is the percentage excretion in the second hour For the arbitrary grouping, a phenolsulphonephthalein excretion of less than 50 per cent in two hours is considered "diminished,"

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* From the Brady Urological Institute of the Johns Hopkins Hospital and the University Hospital Minneapolis.

1 Rowntree L G and Geraghty J T The Phthalein Test, Arch Int Med March 1909 p 284

2 Marshall Jour Biol Chem 1913 xv 487

3 Folin and Denis Jour Biol Chem 1913 xiv 29

4 Foster N B Uremia Arch Int. Med March, 1915 p 356

5 Christian Frothingham O Hare and Woods Am Jour Med Sc 1915 cl 655

6 Schlutz F W and Pettibone C. J V Quantitative Determinations of Nonprotein Nitrogen in the Blood of the New Born Am. Jour Dis Child September 1915 p 206

and a blood urea of fifty or over is considered "increased"

In the consideration of the foregoing results, it is to be noted that the patients on whom these tests were made were persons suffering from some surgical disease of the urinary tract, that their average age was about 55, and that all grades of arteriosclerosis are represented With the exception of the patient in Case 29, no other showed any signs of cardiac decompensation or edema With the exception that a considerable number of patients who had high phenolsulphonephthalein excretions did not have a blood urea test made and so are not reported here, there was no selection of cases for Table 1

TABLE 1—RESULTS OF PHENOLSULPHONEPHTHALEIN AND BLOOD UREA TESTS

GROUP I, WITH APPROXIMATELY NORMAL PHENOLSULPHONEPHTHALEIN EXCRETION AND BLOOD UREA CONCENTRATION

Case No	Phenolsulphonephthalein Time	1st Hour	2d Hour	Blood Urea
1	10	58	14	28
2	10	42	15	34
3	10	45	19	43
4	10	45	10	36
5	8	52	17	30
6	10	40	20	42
7	10	52	10	34
8	10	45	15	36
9	11	40	22	56
10	9	28	28	44
11	9	40	18	31

GROUP II, WITH DIMINISHED PHENOLSULPHONEPHTHALEIN EXCRETION, BUT WITH APPROXIMATELY NORMAL BLOOD UREA

Case No	Phenolsulphonephthalein Time	1st Hour	2d Hour	Blood Urea
12	13	25	21	39
13	34	16	11	53
14	20	17	7	53
15	17	19	17	42
16	10	18	24	32

GROUP III, WITH DIMINISHED PHENOLSULPHONEPHTHALEIN EXCRETION AND INCREASED BLOOD UREA

Case No	Phenolsulphonephthalein Time	1st Hour	2d Hour	Blood Urea
17	21	7	12	94
18	18	12	10	105
19	33	8	9	91
20	18	12	11	83
21	25	Trace	Trace	205
22	20	5	6	164
23		Trace	Trace	430
24		Trace	Trace	290
25	32	9	10	90
26	15	8	10	89
27	8	25	18	80
28	11	21	14	62
29	18	6	9	84
30	32	9	10	90

In looking over the results obtained in this series of cases, one will notice that a high phenolsulphonephthalein excretion was always associated with a normal or only slightly increased blood urea concentration, and that a low phenolsulphonephthalein excretion was usually associated with a very definite increase in blood urea concentration, although in a small number of cases the blood urea was not much increased, if at all (Group II)

The foregoing conclusions in the main are in agreement with those of most investigators, however, it is known that discrepancies are encountered somewhat more frequently when the tests are performed on patients suffering from the various forms of nephritis complicated by cardiac decompensation, with chronic passive congestion and edema For further comparison of these tests see the work of Frothingham and Smillie,[7] Rowntree, Marshall and Baetjer,[8] and of Hopkins and Jonas[9] It is interesting to note that the four cases of superpermeability reported by Baetjer[10] showed normal or only moderately increased nonprotein nitrogen with the hypersecretion of phenolsulphonephthalein

FUNCTIONAL CHANGES FOLLOWING RELIEF FROM BACK-PRESSURE OF URINE

It is well known that an increased phenolsulphonephthalein excretion and a decreased nonprotein nitrogen retention are usually associated with improvement in renal function But nowhere is this change so well shown as in persons relieved of some form of urinary obstruction In Table 2 is shown the result of preliminary treatment of patients with urinary obstruction due to prostatic hypertrophy The treatment consisted in bladder drainage by means of an inlying catheter Most of the patients were able to be up in chairs or walking about during the period of this treatment In most cases there was very little or no change in the physical signs

In Table 2 the determinations on each patient were made at intervals of from four to seven days, the corresponding phenolsulphonephthalein and blood urea tests being made approximately simultaneously Similar tests, made on quite a number of other patients who did not have so high an initial nitrogen retention, showed exactly similar but less marked changes It is also worthy of note that a fall in blood pressure generally accompanied the improvement in condition, in Case 1 the blood pressure dropped from 210 to 155 mm Hg Excepting in Case 4, the patients whose tests are given in Table 2 were all operated on, a prostatectomy being done, and all recovered normally with no uremic symptoms In Case 4 the patient was very drowsy on admission, his mental condition, however, improved markedly, but he was considered too poor a risk for operation

TABLE 2—RESULT OF PRELIMINARY TREATMENT OF PATIENTS WITH URINARY OBSTRUCTION DUE TO PROSTATIC HYPERTROPHY

	Phenolsulphonephthalein Time	1st Hour	2d Hour	Blood Urea
Case 1	21	7	12	94
	15	19	10	72
	12	23	15	64
	13	23	12	47
Case 2	18	12	10	105
	20	14	11	80
	19	18	15	64
	15	24	11	55
Case 3	33	8	19	91
	18	26	25	53
Case 4	25	Trace	Trace	205
	20	Trace	Trace	200
	25	Trace	Trace	158
Case 5	32	9	10	90
	34	16	11	53
	20	17	7	53

During this preliminary treatment the patients received the routine hospital diet, which contains the normal amount of nitrogenous food Folin, Denis and Seymour,[11] Frothingham and Smillie[12] and others, have shown that marked changes in the nonprotein nitrogen of the blood may be produced by variations in the nitrogenous intake But the changes recorded occurred while the patients were on the same diet The great importance of these tests in the selection of the most opportune time for operation is obvious, for often there is very little or no change in the appearance of the patient or in the physical examination or urine analysis

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[7] Frothingham, Channing and Smillie, W G The Relation Between the Phenolsulphonephthalein Excretion in the Urine and the Non Protein Nitrogen Content of the Blood in Human Cases, Arch Int Med, October, 1914, p 5

[8] Rowntree, L G rshall, E K, Jr, and Baetjer, W A Further Studies of Renal Function in Renal, Cardiorenal and Cardiac Diseases, Arch Int Med, April, 1915, p 543

[9] Hopkins, A H, and Jonas, Leon Studies in Renal Function with Special Reference to Non Protein Nitrogen and Sugar Concentration in the Blood, Phenolsulphonephthalein Elimination and Blood Pressure, Arch Int Med, June, 1915, p 964

[10] Baetjer, W A Superpermeability in Nephritis, Arch Int Med June, 1913, p 593

[11] Folin, Otto, Denis, W, and Seymour, M The Non Protein Nitrogenous Constituents of the Blood in Chronic Vascular Nephritis (Arteriosclerosis) as Influenced by the Level of Protein Metabolism, Arch Int Med, February, 1914, p 224

[12] Frothingham, Channing, Jr, and Smillie, W G A Study of Different Nitrogenous Diets in Chronic Nephritis, Arch Int Med, February, 1915, p 204

EFFECT OF ANESTHETIC AND OPERATION ON BLOOD UREA

1 Nitrous Oxid-Oxygen-Ether Anesthesia, with Rebreathing Very little ether was used, occasionally none at all, and never so much but that the patients were conscious in five or ten minutes after operation The blood urea determinations were made twenty-four hours or less before operation, and again from twenty-four to forty-eight hours afterward, and on some of the patients subsequent determinations were made at three and five day intervals The results are shown in Table 3

TABLE 3—BLOOD UREA FINDINGS WITH NITROUS OXID OXYGEN ETHER ANESTHESIA, WITH REBREATHING

Case No	Operation	Blood Urea Before	Blood Urea Afterward	Subsequent Determinations
1	Excision of sinus tract to kidney	28	38	
2	Nephrectomy	34	44	
3	Nephrectomy	43	68	
4	Pyelotomy	36	70	
5	Prostatectomy	30	59	
6	Prostatectomy	64	87	
7	Prostatectomy	47	57	
8	Prostatectomy	53	48	
9	Nephrectomy	79		192 202 159 104 53
10	Nephrectomy	63		130 170 104 79
11	Vesical lithotomy	181	227	262 300 413
12	Prostatectomy	47		198 103,67
13	Prostatectomy	49	76	

In Table 3 it will be noticed that all patients except one showed a more or less marked rise in blood urea immediately following the operation, the average being 21 mg per hundred c c This increase must be considered all the more real when it is remembered that immediately after operation each patient receives from 1,000 to 1,500 c c normal salt solution infusion, and that they are all on a very low protein diet for at least forty-eight hours after operation The average age of these patients was about 50 The kidneys which were removed had all been shown previously by separate phenolsulphonephthalein tests to have markedly diminished function For some reason not obvious, the patients in Cases 9, 10 and 12 developed a very high nitrogen retention after operation They showed definite but not marked uremic symptoms All recovered except the patient in Case 11 This patient was moribund on admission A chronic and extreme grade of urinary obstruction due to a vesicoprostatic calculus developed suddenly into a complete obstruction, and the patient died following an emergency suprapubic cystostomy

2 Ether Anesthesia, Open Method From the nature of the operations in Table 3 it is evident that only the first six cases of Table 4 are comparable with the former These six cases show an average increase of 13 mg urea per hundred c c of blood following operation, compared with an average of 21 mg increase in the former series The remainder of the series in Table 4 shows an average increase of 9 mg per hundred c c blood, although here it is not unusual to meet with cases showing a slight decrease even in the blood urea In very few of the cases from 7 to 25 was any infusion of salt solution given A routine infusion as was given the patients reported in Table 3 would doubtless have lowered still more the slight increase in blood urea The average age of these patients, exclusive of the first six, was about 35 It is interesting to note that the patient in Case 16 who showed a 34 mg rise was in profound shock for some time during and after the operation His blood pressure fell to 40, but later was kept at about 90 by intravenous infusion of salt solution with epinephrin Cases 18 and 19 represent the effect of anesthetic alone and anesthetic with operation on the same patient At the first attempt satisfactory anesthesia could not be induced, although the patient was incompletely anesthetized for over an hour, and a slight decrease in blood urea resulted Two days later a craniotomy was performed, requiring four and a half hours The blood urea was only slightly increased From this table it is seen that in persons suffering from the ordinary surgical diseases there is, as a rule, only a slight, if any, increase in blood urea concentration following an operation under ether anesthesia Even in those patients undergoing an operation on the urinary tract in whom, on account of the age and the nature of the operation, one finds, as a rule, the maximum postoperative rise in blood urea, in this small series of cases, at least, this rise was not as high as that observed in similar cases in which nitrous oxid-oxygen-ether anesthesia was employed This series of cases is evidently too small to serve as the basis for very positive conclusions, but it may be stated that the results obtained here fail to support the contention that nitrous oxid-oxygen-ether anesthesia has a less deleterious effect on renal efficiency than has a pure ether anesthesia

TABLE 4—BLOOD UREA FINDINGS WITH ETHER ANESTHESIA, OPEN METHOD

Case No	Operation	Blood Urea Before	Blood Urea Afterward
1	Prostatectomy	63	102
2	Prostatectomy	39	60
3	Prostatectomy	29	35
4	Prostatectomy	43	34
5	External urethrotomy	56	68
6	Pyelotomy	35	46
7	Appendectomy	29	48
8	Salpingectomy	30	40
9	Lane plate	28	34
10	Bone graft	27	33
11	Fracture	29	39
12	Appendectomy	35	40
13	Cholecystotomy	32	43
14	Hysterectomy	28	41
15	Splenectomy	33	64
16	Splenectomy	36	70
17	Plastic	27	25
18	None	31	30
19	Craniotomy	30	33
20	Osteomyelitis	18	32
21	Gastro enterostomy	42	42
22	Fracture	41	32
23	Goiter	27	28
24	Gilliam	34	35
25	Hernia	37	58

The effect of operation under gas and ether anesthesia on phenolsulphonephthalein excretion has been studied by Sanford,[13] Block[14] and Miller and Cabot [15] There is a general agreement that, as a rule, there is a definite decrease in phenolsulphonephthalein excretion after ether anesthesia, the decrease varying roughly with the amount of anesthetic and length of operation

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[13] Sanford Cleveland Med Jour 1912 xi 763

[14] Block F B The Effect of Operation on Kidney Excretion as Indicated by the Phenolsulphonephthalein Test THE JOURNAL A M A April 25 1914 p 1309

[15] Miller R H and Cabot Hugh The Effect of Anesthesia and Operation on the Kidney Function as Shown by the Phenolsulphonephthalein Test Arch Int Med March 1915 p 369

Occasionally, however, there is a temporary increase in postoperative phenolsulphonephthalein excretion In the consideration of the effect of gas oxygen anesthesia on the phenolsulphonephthalein excretion, Miller and Cabot say, "It would seem natural to expect the kidneys to show little or no effect after this anesthesia, whereas our few cases (nine) show even more decrease in output than after ether" It is worthy of note that this statement is confirmed by the results of the small series reported here, in which the increase in blood urea concentration following operation under gas-oxygen-ether anesthesia was slightly greater than the increase following similar operations under ether

Opportunity has recently been afforded to investigate changes in blood urea following major operations performed under local anesthesia It is suggestive that in three consecutive cases operated on under local anesthesia there was no postoperative rise in blood urea

BLOOD UREA DETERMINATIONS IN CASES OF UREMIA

In the series of patients examined, only six showed definite symptoms of uremia The blood urea findings are given in Table 5

TABLE 5—BLOOD UREA FINDINGS IN CASES OF UREMIA

Case No	Blood Urea at Different Stages	Results
1	190, 220, 260, 290	Died
2	181, 227, 262, 300, 413	Died
3	350, 400, 460	Died
4	146, 255, 293, 104	Improved
5	205, 200, 158	Improved
6	198, 115, 44	Improved

The patients in Cases 2, 4 and 6 were operated on, operations on the other three were not advised The first figures given are the blood urea values at the onset of definite uremic symptoms, except in the patient in Case 3 who was uremic on admission The patient in Case 1 had an extensive vesical carcinoma, and developed suddenly an almost complete anuria, possibly from occlusion of the ureters Case 2 was the emergency suprapubic cystostomy case mentioned before Case 3 was in a patient with marked arteriosclerosis and urinary obstruction due to prostatic hypertrophy The patient in Case 4 had a functionless left kidney, and a ureterolithotomy on the right side was necessary This was followed by a temporary occlusion of the ureter with development of uremic symptoms The obstruction disappeared and the patient improved rapidly after having had a maximum blood urea of 293 This is the highest blood urea with subsequent recovery encountered in this work Case 5 was in a patient with prostatic hypertrophy and urinary obstruction Case 6 was a prostatectomy case in which the patient developed a marked nitrogen retention, but with recovery The parallelism between the clinical picture and the blood urea findings in all these patients was very striking Foster[4] emphasizes the possibility of failing to recognize uremic states in patients with only a slightly increased nonprotein nitrogen, and believes that uremia in such persons occurs more frequently than is generally supposed In all the cases of uremia met with here, there was a very marked increase in blood urea

CLINICAL SIGNIFICANCE OF PHENOLSULPHONEPHTHALEIN AND BLOOD UREA TESTS IN SURGERY

In the consideration of the value and application of these tests one may assume that a high phenolsulphonephthalein output is practically always associated with a normal blood urea concentration and indicates that the patient has no renal lesion of sufficient importance to contraindicate operation under general anesthesia Of course, a routine urinalysis should always be made The rare cases of nephritis with superpermeability may be encountered On the other hand, a low phenolsulphonephthalein output does not necessarily contraindicate operation, for patients with a low phenolsulphonephthalein output but who have a normal or only slightly increased blood urea concentration often withstand an anesthetic and operation very well, other conditions being normal A low phenolsulphonephthalein output with a high blood urea concentration, however, does contraindicate an operation under a general anesthetic Of course, no absolute line can be drawn, but it is just this class of cases which show a marked increase in nitrogen retention after operation It is to be noted that often a thorough physical examination and urinalysis by themselves will fail to distinguish these cases

Blood urea tests are of especial importance in following a certain class of cases after operation, namely, those patients whose operations are such that extra-urethral drainage at various points of the urinary tract must be provided In such cases it is generally impossible to obtain a twenty-four hour specimen of urine, single specimens are often contaminated by discharges from the operative incisions, and it is impossible to do a phenolsulphonephthalein test because the specimens cannot be collected accurately In such cases blood urea tests are of very great importance as indicators of renal efficiency, and not infrequently it becomes advisable to operate on a patient who already has a ureteral, vesical or urethral fistula In these cases, as a rule, the blood urea or nonprotein nitrogen determination is the best indicator of the renal condition

SUMMARY

The agreement between phenolsulphonephthalein and blood urea tests is, as a rule, very striking, though not infrequently a low phenolsulphonephthalein excretion is associated with a normal or only moderately increased blood urea concentration

These tests are of great importance in selecting the most opportune time for operation so far as renal function is concerned

Following an operation under a general anesthetic there is, as a rule, an increase in blood urea concentration This increase is most marked after operations on the urinary tract and especially on patients who already have diminished renal function In a small series of cases this increase was slightly more marked following operations under gas-oxygen-ether anesthesia than following similar operations under ether

Blood urea determinations are of great value in the diagnosis and prognosis of uremic states Not infrequently blood urea concentration can be determined when other renal function tests are very difficult or impossible

In this investigation definite symptoms of uremia in uncomplicated cases appeared when the blood urea concentration reached 180 to 200

There is a definite group of patients who have a low phenolsulphonephthalein excretion but a normal or approximately normal blood urea concentration Many members of this group withstand a general anesthetic without any complications due to renal insufficiency

PARALYSIS DURING PASTEUR ANTIRABIC TREATMENT

WITH REPORTS OF SEVEN PERSONAL CASES, ONE TERMINATING FATALLY, AND SIX OTHER PREVIOUSLY UNREPORTED CASES *

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In the vast majority of instances, the Pasteur antirabic treatment is neither accompanied nor followed by any complications of importance The slight pain of the injections, some degree of local or constitutional reaction, occasionally a fairly marked urticaria, and possibly a localized abscess, if the physician is careless in the care of his syringe, are all the discomforts that are likely to be encountered

There is one rare complication, however, the so-called "treatment paralysis," which has long engaged the attention of those in charge of antirabic institutes, and the true nature and cause of which are not fully understood

This complication occurs with great rarity, and usually terminates in recovery, so that it should be considered no bar to antirabic treatment when this is evidently needed, but the possibility of paralysis should always be explained to those in whom infection is doubtful, or who are inclined to insist on being treated merely as a sentimental matter of precaution

The symptoms vary all the way from a slight degree of neuritis, with little or no motor involvement, to an acute ascending paralysis which may be fatal

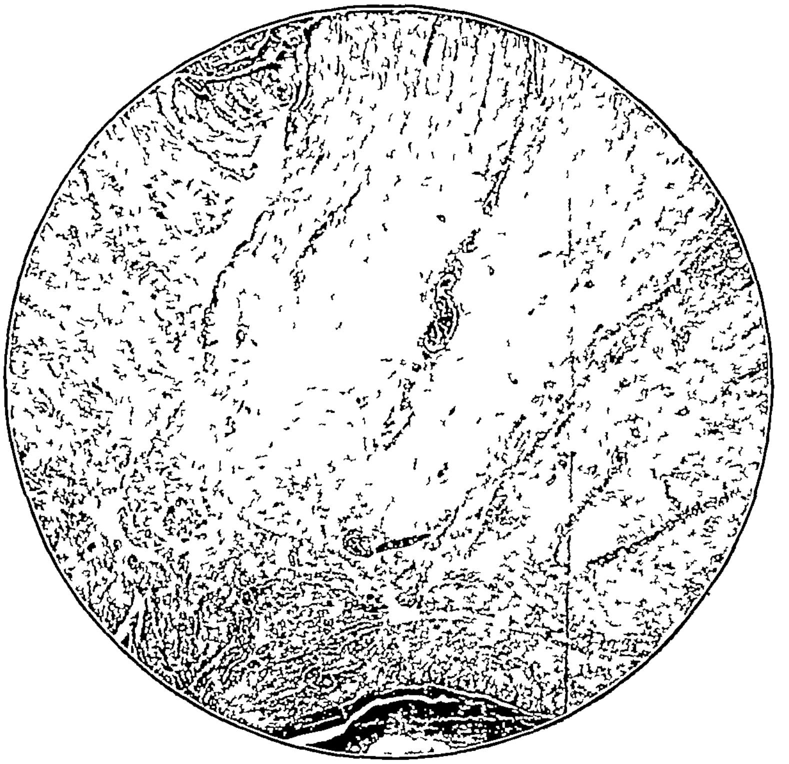

Fig 1 (Case 6)—Spinal cord cervical cord, considerably crushed showing dark streaks of fresh softening which follow in a general way the lines of the connective tissue septa right lateral column (of the illustration) more swollen than the left

An analysis of the parts of the body involved in thirty-seven of forty cases reported by Remlinger[1] in 1905 is as follows legs and sphincters, 17 cases, legs alone, 6, legs, sphincter, arms, face, 4, legs, sphincters, face, 4, arms and face, 1, arms alone, 1, face alone, 1, legs, arms, sphincters and bulbar symptoms, 1, legs and face, 1, and legs, sphincters and bulbar symptoms, 1 case Thus, in 37 cases, the legs were involved in 34, sphincters in 27, face in 10 and arms in 7 of the cases, while bulbar symptoms were present in only 2

The frequency of paralysis as a complication of antirabic treatment is variously estimated by different writers, but its real frequency is unknown, since many cases, especially the mild ones, are doubtless not reported

Remlinger,[1] in 1905, collected 40 instances of paralysis out of 107,712 patients treated, 2 of these being fatal Stimson,[2] in 1910, stated that later reports had brought the total up to 76 cases, with 4 deaths Simon,[3] in 1913, collected data up to and including 1911, showing the occurrence of 100 cases among 217,774 persons treated, and mentioned 3 other cases, without indicating the number treated In this series there were 19 deaths The incidence of paralysis, however, is evidently different under different methods of antirabic treatment Simon's[3] figures showed 6 cases among 32,676 patients treated by the classical Pasteur method 16 cases among 8,659 patients treated by the modified (more intensive) Pasteur method, and only 3 cases among 51,417 patients treated by the Hogyes method, with dilutions of fresh fixed virus

Hasseltine,[4] in a brief review of the literature since Simon's report, mentions cases reported, by Higier,[5] Hudovernig,[6] Sterling,[7] Kozewalow,[8] Mucharinski, Abramov, Jochmann,[9] Goldberg and Oszesalski,[10] and Fabricius[11] Hasseltine adds four cases of his own, one of which was fatal, and states that he has knowledge of two other cases, reports of which are as yet unpublished He quotes Park and Williams,[12] who state that there have been seven cases of paralysis with two deaths among 6,850 cases treated by the Pasteur clinic of New York City health department, including the year 1913 Hasseltine thus brings the total to 133 cases, up to and including 1913, with twenty-five deaths

Poor,[13] in 1909, re-

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* Owing to lack of space the complete case reports and the pathologic report of a fatal case are omitted in The Journal These will appear in full in the author's reprints a copy of which can be had by sending a stamped self addressed envelope to him

[1] Remlinger Accidents paralytiques au cours du traitement antirabique Ann de l Instit Pasteur 1905 xix, 625

[2] Stimson A M Facts and Problems of Rabies Hyg Lab Bull 65 U S P H S 1910

[3] Simon Ueber Lahmungen im Verlauf der Tollwutschutzimpfung Centralbl f Bakteriol Orig 1913 lxviii 72

[4] Hasseltine H E Paralysis During Antirabic Treatment Pub Health Rep Oct 24 1913, p 2220 ibid July 30 1915 p 2226

[5] Higier Heinrich Akute Aufsteigende Landrysche Paralyse im Verlauf von Lyssa humana Ztschr f d ges Neurol u Psych Orig 1912 xii 353

[6] Hudovernig Polyneuritis im Anschlusz an antirabische Schutzimpfungen author's abstract in Neurol Centralbl 1912 xxxi 1166

[7] Sterling Ueber die akuten Paralytischen Syndrome nach Wutschutzimpfungen Ztschr f ges Neurol u Psych Orig 1913 xvii 160

[8] Kozewalow, S Zur Virulenz des fixen Virus der Tollwut fur den Menschen Centralbl f Bakteriol Orig 1914 lxxiii 54

[9] Jochmann G Ueber atypische Lyssaerkrankungen und ihre Beziehungen zur Wutschutzimpfung Deutsch Ztschr f Nerven 1913 xlvii 267

[10] Goldberg J and Oszesalski K Ein Fall von Lyssa mit meningitischen Symptomen, Wien klin Wchnschr 1913 xxvi 1981

[11] Fabricius Acute Ascending Lethal Paralysis After Antirabic Treatment Arch Diagnosis 1909 p 181

[12] Park and Williams Pathogenic Microorganisms Ed 5 Lea & Febiger New York 1914 p 585

[13] Poor D W An Occasional Complication of Pasteur Antirabic Treatment Col Studies Research Lab Dept of Health New York City 1908-1909 p 121

ported eight cases of neuritis without paralysis, and four of paralysis, one of which was fatal, among 2,300 patients treated by him at the New York City health department The figures of Park and Williams, quoted above, include Poor's four cases of paralysis, and three of the cases, including the fatal one, which are reported in the present paper

My seven personal cases, together with the six other cases which are here first reported, thus bring the total up to 143 cases with twenty-five deaths This should be corrected to 142 cases with twenty-four deaths, since Poor's fatal case and that of Fabricius were the same

The mortality among these published case reports, 16 2 per cent, must not be taken as representing the true mortality incident to this complication of antirabic treatment, since it is certain that many mild cases are not reported, while it is likely that reports of most of the severe and fatal ones have been published Although the average mortality among published reports of paralysis is from 15 to 20 per cent, this is reduced to a negligible figure when compared with the total number of cases treated Simon's[3] figures, 100 reported cases with nineteen deaths among 217,774 patients treated at various institutes, show a mortality of 19 per cent among the patients developing paralysis, but so rarely does a case occur that the incidence of the disease in his series was only 0 048 per cent and the mortality but 0 00812 per cent of the total number of cases treated

As regards prognosis, the cases may be roughly divided into three classes The mild ones with transitory paralysis of face or limbs all recover The acute paraplegias of the lower extremities with or without the involvement of the sphincters usually recover Death, if it occurs, is likely to be due to cystitis or bedsores after a prolonged illness Remlinger[1] reported two deaths in forty cases, and Simon[3] three deaths in twenty-four cases of this type The severest cases presenting the clinical picture of an acute ascending paralysis of the Landry type have a bad prognosis Simon reported fifteen deaths among thirty-six such cases, a mortality of 41 6 per cent The deaths in this group occur in a few days from respiratory or cardiac paraysis, or later, from inhalation pneumonia, cystitis or bedsores

The time of development of symptoms is fairly characteristic According to Simon,[3] they usually make their appearance from eleven to thirty days after the bite, and between ten and twenty days after the beginning of the injections Only one quarter of the cases develop after the completion of a full course of treatment, and most of these within seven days thereafter

In the thirteen cases reported in the present paper, the development of first symptoms of paralysis in relation to the date of the bite, and to the beginning of treatment, is as follows My seven personal cases Symptoms first appeared during treatment in six cases, and three days after its completion in one case Average, twenty-three days after the bite and seventeen days from beginning of treatment Among the six other cases, symptoms first appeared during treatment in four cases In two cases they appeared two and ten days, respectively, after treatment Average, twenty-six days after the bite and seventeen days from the beginning of treatment

These figures tend to bear out Simon's statement that whether counting from the date of the bite or from the beginning of treatment, the incubation is shorter than in most cases of rabies This fact is important in view of the contention of some writers that the condition is one of true rabies caused by the bite, but rendered mild by the antirabic treatment

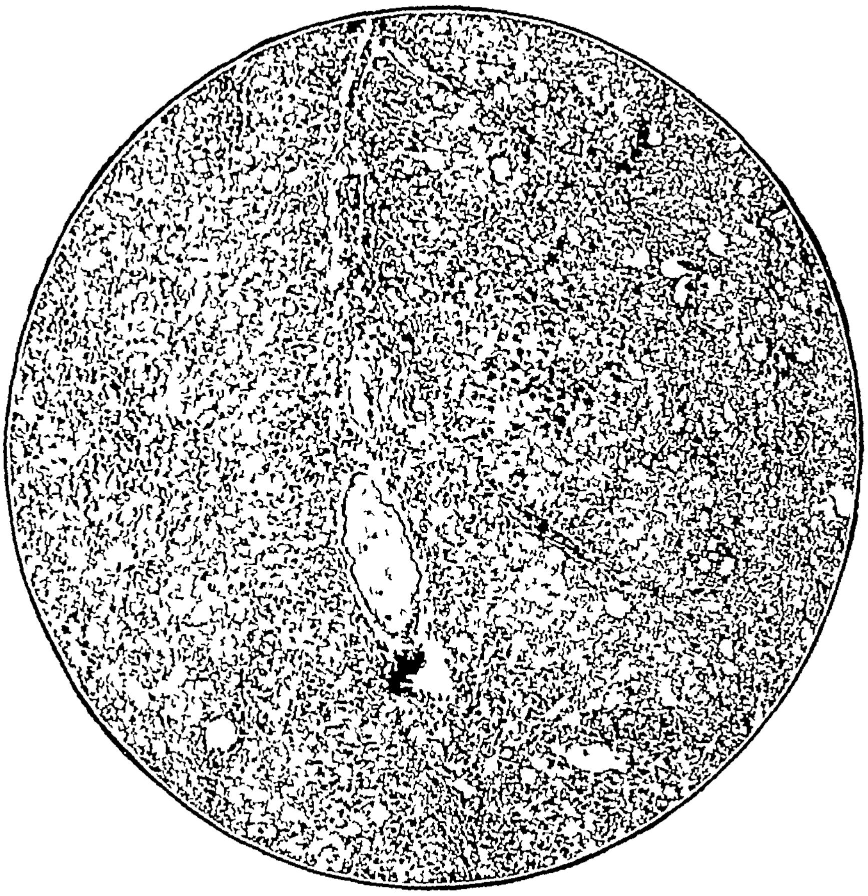

Fig 2 (Case 6) —Spinal cord acute softening, showing as darker staining polycellular strips on either side of the connective tissue septa, the rest of the section, except for numerous small holes, looks practically normal, and shows plain axis cylinders surrounded by their sheaths

The onset of the symptoms is usually acute, with pain and numbness of the affected parts, followed by muscular weakness Prodromal symptoms if present are mild, and consist only of malaise and nervous depression, with perhaps some restlessness, insomnia and anorexia

Males seem to be affected much more frequently than females In Simon's[3] publication, among 84 cases there were 60 males and 10 females, 6 of the remaining 14 were unknown Hasseltine's[14] 4 cases were all in males Of my 7 personal cases, 5 were male, and of the 6 additional cases reported, all were male This preponderance of males is probably partly due to the fact that undoubtedly more males are bitten and thus more are treated Unfortunately, available statistics do not state the relative proportion of males and females in the total number of cases treated

Young children are rarely affected Most of the cases occur in adults of varying ages All of the thirteen cases reported in this paper were in adults between 23 and 62 years of age, the average being 41 years Seven of the patients were in the thirties

It is stated that persons who are alcoholic, syphilitic or neurotic are more likely to be affected than those who have no such taint, but exceptions to this rule occur fairly often Paralysis occurs so rarely in proportion to the total number of cases treated that a special idiosyncrasy on the part of the patient must be assumed

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[14] Hasseltine H E Paralysis During Antirabic Treatment, Pub Health Rept, Oct 24, 1913, p 2220, ibid, July 30, 1915, p 2226

PATHOLOGY

Jochmann[9] in a careful study of a fatal case, found the lesions disseminated, but especially localized in the lumbar and cervical cord, and associated with a perivascular serous transudation and with marked edema of the meninges of the dorsal and lumbar cord Small foci of softening were present in the lumbar cord The large ganglion cells of the gray matter had partly disappeared, some were atrophied and their chromatin had gone into solution A mild round cell infiltration was noticeable throughout the whole cross-section of the gray matter The same changes were found in the cervical cord, but to a much less degree The brain findings were not described, except that Negri bodies were not demonstrated Rabbits, rats and dogs were inoculated by Joseph Koch from the lumbar cord in this case Some of the animals, after a long incubation, died of rabies In two of the rabbits, Negri bodies were found in size and shape as they occur in inoculation rabies

The serous exudation and meningeal edema which occurred in the lumbar cord in this case would explain the otherwise puzzling clinical fact that in spite of a most severe syndrome, such as complete flaccid paralysis of the extremities, colon, bladder, etc, the symptoms may begin to abate within a few days, and a rapid cure result

ETIOLOGY

The etiology must still be considered as not definitely settled The principal explanations advanced for the phenomena observed are

1 *Anaphylaxis,* due to repeated injections of foreign protein as contained in the rabbit cord employed This explanation was advanced by Harvey and McKendrick,[15] and entertained by Muller[16] It is conceded that the Hogyes method of treatment with diluted fresh fixed virus, in which the proportion of nerve substance is at a minimum, is far less often complicated with paralysis than is the Pasteur method in which the amount of nerve tissue is much larger The summary from Simon[8] (Table 1) shows this

TABLE 1—INCIDENCE OF PARALYSIS UNDER DIFFERENT METHODS OF ANTIRABIC TREATMENT

Method	Number of Cases Treated	Cases of Paralysis	Proportion
Classical Pasteur method	32 676	6	1 5446
Modified Pasteur method	8 657	16	1 541
Högyes method	51 417	3	1 17130

If the foreign protein material in itself were the cause of "treatment paralysis," the percentage of cases occurring under the classical and modified Pasteur methods should be approximately the same, since they contain about the same amount of nerve substance, differing only in the strength of material used Yet, as shown by Table 1, paralysis occurs ten times as often under the modified (intensive) as under the classical Pasteur method

Another point against the anaphylaxis theory is the fact that paralysis has not been produced in animals by the injection of large amounts of normal nerve tissue

2 *The specific action of a "rabies toxin"* which is in combination with the fixed virus used for treatment Remlinger[1] and Babes[17] have held that this, together with an idiosyncrasy on the part of the patient, is responsible for the symptoms Babes showed that animals injected with fixed virus which has been filtered or otherwise treated so as to eliminate infection by a micro-organism do not die of rabies, but develop fever, emaciation, cachexia and paralysis, and die after a protracted period The theory of a toxin is a plausible one, but there is no agreement in regard to it

3 *Street virus infection,* received from the biting animal, and so modified by treatment that the disease runs an atypical and usually mild course ending in recovery

This view was held by Joseph Koch[18] He inoculated animals from the lumbar cord in a fatal case Some of these, after a long incubation, died of rabies He explained the negative results obtained by Babes in four cases by the fact that Babes had used only the brain and medulla for inoculation, whereas it is the cord in these patients that is infective

More lately Jochmann[9] has defended the same view and has attempted to explain in accordance with this theory the cases such as Franca's[10] case quoted below, which seem to others to disprove it

Against this view are the following facts A number of cases have occurred in which the biting animal was not mad, and others in which the patients were not bitten, but had taken antirabic treatment merely as a precaution Pain at the site of injury is rarely felt in paralysis cases The incubation period is usually too short for infection with street virus Paralytic rabies in animals is regarded as an intense rather than an attenuated form of the disease, therefore street virus rabies, modified by treatment so as to become mild, should not be of the paralytic type

4 *Fixed virus infection due to the treatment* It is held by some writers that the unusually early appearance of symptoms in occasional cases is against this view Strong emulsions are not commonly injected during the first days of treatment, yet the paralytic symptoms sometimes appear within seven days after the first injection of strong cord material They also insist that if fixed virus possessed virulence for man, paralysis would be of frequent occurrence among the thousands of persons treated every year, whereas it is well known that it is very rarely seen

Among others, Kozewalow[8] holds that fixed virus infection is responsible for most instances of paralysis incident to antirabic treatment In defense of his position he cites several fatal cases with necropsies followed by animal inoculations

(*a*) A case of his own with symptoms of ascending paralysis No Negri bodies were found in the patient s brain Animal tests comprised thirty-three rabbits inoculated with the brain material Twenty-four of these died of rabies with an *incubation of from* six to seven days The others died of sepsis

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[15] Harvey and McKendrick Theory and Practice of Antirabic Immunization Scientific Memoirs Gov t India New Series No 30 Calcutta 1907

[16] Muller E Ueber akute Paraplegien nach Wutschutzimpfungen Deutsch Ztschr f Nervenh 1908 xxxiv 252

[17] Babes and Marinesco La *paraplegie ascendante* mortelle survenue apres le traitement antirabique Compt rend Soc de biol, 1908 lxiv 964

[18] Koch Joseph Ueber abortive Tollwut Ztschr f Hyg 1909 lxiv 258 Ueber die Entstehung der akuten Periplegie nach Lyssa infektion Centralbl f Bakteriol Abt I Orig 1912 lxiv 199

[19] Franca Du danger de l emploi des moelles plus virulentes dans le traitement de la rage Centralbl f Bakteriol Abt I Orig 1910 lv 154

(*b*) Five cases from Bareggi[20] following treatment with fresh fixed virus The patients died within a week of acute ascending paralysis Rabbits inoculated from their brains showed symptoms of rabies in from five to six days

(*c*) Franca's[19] patient, bitten by a dog not rabid (microscopic and inoculation tests negative) Patient developed ascending paralysis on the fifteenth day of treatment She had received a one-day cord injection for the first time three days previously On the sixth and eighth days of illness spinal fluid was withdrawn and injected into the anterior ocular chamber of three rabbits After eleven days one of these died with symptoms of rabies Two other rabbits were inoculated subdurally with the cord of this rabbit Both developed rabies on the seventh day, and died on the ninth day after vaccination A rabbit injected intramuscularly with the cord of this rabbit died nine days later with typical symptoms of rabies The patient died on the fortieth day of illness It is said that this case has modified Koch's view so that he has admitted the possibility of fixed virus as well as street virus infection in these cases

(*d*) The case of Goldberg and Oszesalski[10] a boy of 13 years bitten by an unknown dog which was not captured He received six injections in the next four days in a Warsaw institute He then stopped treatment and walked 200 kilometers to his home Thirteen days after the bite and twelve days after the first injection, he was taken sick with symptoms resembling cerebrospinal meningitis The cerebrospinal fluid, however was negative bacteriologically and consciousness was retained throughout The boy died suddenly from respiratory paralysis after five days No Negri bodies were found The emulsified spinal cord produced rabies in rabbits in from seven to eight days

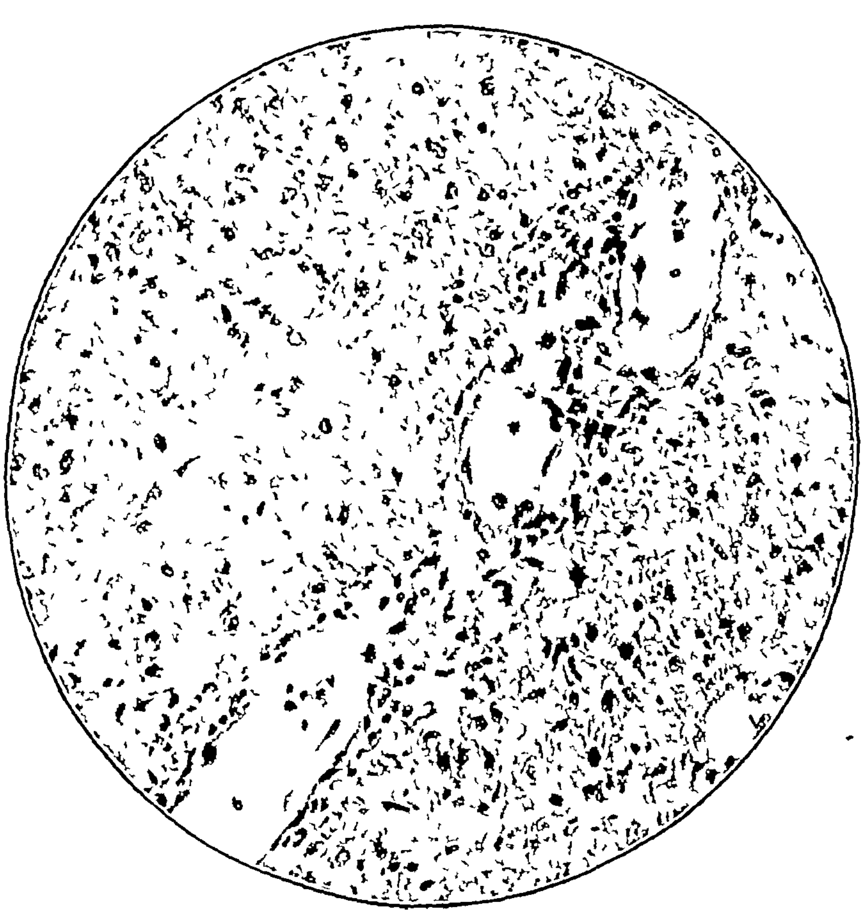

Fig 3 (Case 6) —Spinal cord a softened area, more highly magnified than in Figure 2, showing, very poorly, the Gitter or granule cells these are best seen perhaps in the right lower quadrant in the left upper corner of the illustration, axis cylinders and myelin sheaths which still retain their form may be seen, note lymphoid cells in the sheaths of the blood vessels

Kozewalow[8] holds that the short incubation of rabies in the animals inoculated from these cases demonstrates that these paralyses are directly due to fixed virus infection As further proof of his position, he states the following facts At the beginning of 1909 the treatment in Cracow was intensified, and the use of a one-day cord begun, whereas, before that, nothing stronger than a two-day cord was used Shortly afterward they began to have cases of paralysis Not less than twenty persons were affected in the course of a month The symptoms were mild, and consisted of paresis of the arm or leg, or partial urine retention, and passed off in one or two days The use of the one-day cord was then discontinued, and the symptoms stopped He cites experiments of Kraus and Fukuhara,[21] who proved that different strains of fixed virus in different institutes vary in virulence, since some are virulent subcutaneously in rabbits and white mice, while others are nonvirulent He gives the results of some experiments of his own, and states that each institute should analyze its own virus and determine whether it can or cannot use an intensive treatment

In connection with these statements of Kozewalow, the experiences of Poor[13] and of myself are very suggestive Of Poor s twelve cases, one occurred in 1906, four in 1907, and seven during the nine months between February and October, 1908, after which, up to the time of his report, nine months later, no more cases had occurred About October, 1908, he began to inoculate rabbits from the cord rather than from the brain of the rabbit of the preceding series Thus he undoubtedly used a weaker virus, as the rabbits did not show initial symptoms until a day, sometimes two days later than by the other method He also gave smaller and weaker doses to those who were but slightly bitten

I have used three different schemata of Pasteur treatment, the full course in each being twenty-one days

Table 2 will show their comparative strength by indicating the number of injections of each cord in a full course of twenty-one days' treatment It also shows the number of cases of paralysis and of rabies which occurred among the patients treated under each scheme

Thus it will be seen that Scheme 2 is somewhat stronger than Scheme 1, since it contains three more injections of two-day cord, and much stronger than Scheme 3, which includes nothing more active than three-day cords Scheme 2 is very similar to the one employed by the Hygienic Laboratory of the U S Public Health Service, Washington, D C, and by most of those who produce antirabic vaccine in this country, with the following differences 1 The amount of cord per dose was only two thirds as much as that employed in the Washington scheme 2 We used a two-day cord instead of one-day cord on the eighth and twenty-first days of treatment

One of my cases of paralysis, Case 1, occurred in 1912 while Scheme 1 was in use Other cases may have occurred under this plan previous to 1912, but the records were not available for examination

Five of the remaining six cases, including the one terminating fatally, occurred between Aug 15 and Oct 17, 1913, in the early weeks of the employment of Scheme 2 Although the plan was not changed, another case did not develop until the following spring Strangely enough, in November and December, 1913, the rabbits used for producing the antirabic vaccine showed a tendency to develop initial symptoms in five or even four, instead of six days and it was necessary to use lumbar cord and sometimes cord dried one day, instead of medulla, for inoculation, in order to bring the incubation back to six days Still no paralysis cases occurred during this period Finally, May 1, 1914, at a time when the rabbits were coming down in exactly six days another case of paralysis developed (Case 7, a severe one, with recovery)

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[20] Bareggi Sur cinque casi di rabbia paralitica (da laboratorio) nell'uomo, Gaz med lombarda, xlviii, 217

[21] Kraus and Fukuhara Ueber das Lyssavirus Fermis, Wien klin Wchnschr, 1908, p 1698

TABLE 2—SCHEMES OF PASTEUR TREATMENT USED BY NEW YORK CITY HEALTH DEPARTMENT

Cord Dried	Scheme 1	Scheme 2	Scheme 3
	Jan 1 191 to Aug 2 1913	Aug 3 1913 to May 6 1914	May 7 1914 to Mar 7 1916
	Number of injections in 21 days	Number of injections in 21 days	Number of injections in 21 days
Ten days	3	0	0
Nine days	3	0	0
Eight days	1	1	2
Seven days	1	1	2
Six days	1	1	2
Five days	1	2	2
Four days	3	5	6
Three days	3	7	8
Two days	3	8	0
No of patients treated	1 405	811	911
Cases of paralysis	1	6 (one fatal)	0
Cases of rabies	4	2	4

Scheme 3 was then adopted In this no two-day cords are used except occasionally in a case of very severe face bite Since then no instances of paralysis have occurred (from May 7, 1914, to March 7, 1916, a period of twenty-two months)

In my one fatal case of paralysis, the brain and cord were unfortunately put into liquor formaldehydi, so that no opportunity of trying animal inoculation was afforded I therefore can express no opinion, based on experience, on the important question whether or not these paralyses are due to fixed virus infection However, there is no doubt in my mind that in most of the cases, at least, the symptoms are caused, not by street virus infection, modified by the treatment, but by the treatment itself either through the medium of fixed virus infection or through the action of a toxin, or both In any event there must be a special idiosyncrasy on the part of the patient Otherwise the cases would be enormously more frequent than they are

Table 3 shows, as in Simon's series,[8] that the lower extremities, sphincters and face are most often involved, in the order named

TREATMENT

The treatment of these patients is to be conducted on general principles, according to the parts of the body involved No special type of treatment based on the peculiar etiology of the condition has been developed

If the patient has been bitten by a dog known to have been rabid, the preventive inoculation should not be discontinued, since in numerous reported cases they have been persisted in without apparent detriment They may be discontinued if the biting animal was probably not rabid

CONCLUSIONS

1 Paralysis complicating the Pasteur antirabic treatment is very rare, but doubtless occurs in mild form more often than is known It affects adults chiefly, young children almost never

2 The prognosis is good in cases of mild or moderate degree, but the mortality among the severe cases is high

3 The administration of antirabic treatment is therefore not entirely devoid of risk

4 The possibility of the occurrence of paralysis in any particular case, however, is so slight that it should not deter those who evidently need antirabic treatment A person bitten by a rabid animal is much more likely to develop rabies, which is certainly fatal, than paralysis, which usually ends in recovery

5 The slight risk of paralysis should always be explained to those who are inclined to insist on antirabic treatment in the absence of clinical or laboratory evidence that the biting animal was rabid

6 In most instances this paralysis is caused by the antirabic treatment itself (fixed virus infection, or toxin, or both) It is not often due to street virus

TABLE 3—BRIEF SUMMARY OF CASES FIRST REPORTED IN THIS PAPER

	Case No	Symptoms Began		Parts of Body Involved	Improvement Began After	Termination
		Days After Bite	Days After Beginning of Treatment			
Author s Personal Cases	1	23	19	Both legs below knees	Few days	Recovery after a few weeks
	2	14	13	Lower extremities and bladder	Few days	Recovery after a few weeks
	3	17	15	Upper and lower extremities trunk throat	Few days	Recovery after a few weeks
	4	53	18	Face both sides	Few days	Recovery after a few weeks
	5	17	13	Both legs below knees	Two days	Recovery after a few days
	6	14	13	Lower extremities abdominal muscles intestines and sphincters completely paralyzed Upper extremities weak	No	Died after 11 days*
	7	20	15	Lower extremities and sphincters completely paralyzed	After 2 weeks	Recovery practically complete after 6 months
Additional Cases	8	54	23	Face right side	?	Recovery after 4 weeks
	9	14	12	Lower extremities and sphincters	After 9 days	Recovery complete after a few months
	10	53	31	Face right side	Few days	Recovery after 2 weeks
	11	20	16	Face (slight) legs weak	?	Recovery gradual complete after 6 months
	12	19	14	Left leg and bladder	?	Poor condition after 10 days no further report
	13	16	12	Legs and bladder	?	Symptoms persisted after 8 days no further report

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* Necropsy showed spinal pachymeningitis macroscopically No inoculation tests as brain and cord were put into liquor formaldehydi by mistake Stained sections of hardened brain showed no Negri bodies and no special lesions Cord showed acute softening most marked in cervical well marked in dorsal and less marked in lumbar region

infection modified by the treatment Its incubation is shorter than that of most cases of street virus rabies

7 Variations in the strength of the fixed virus used are probably a factor in the etiology

8 Personal idiosyncrasy is an important predisposing condition

CONGENITAL STENOSIS OF THE DUODENUM IN AN ADULT*

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AND
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Congenital stenosis of the duodenum is an uncommon condition, almost always fatal in early life The reported cases, collected in several careful reviews, have all been in infants dying under 6 months No new review will be attempted here, except briefly to summarize the conditions described Louise Cordes[1] found fifty-seven cases reported to 1901 — forty-eight of complete atresia fatal in less than nine days, and nine cases of stenosis without complete blocking, the longest duration of life in which was 6 months

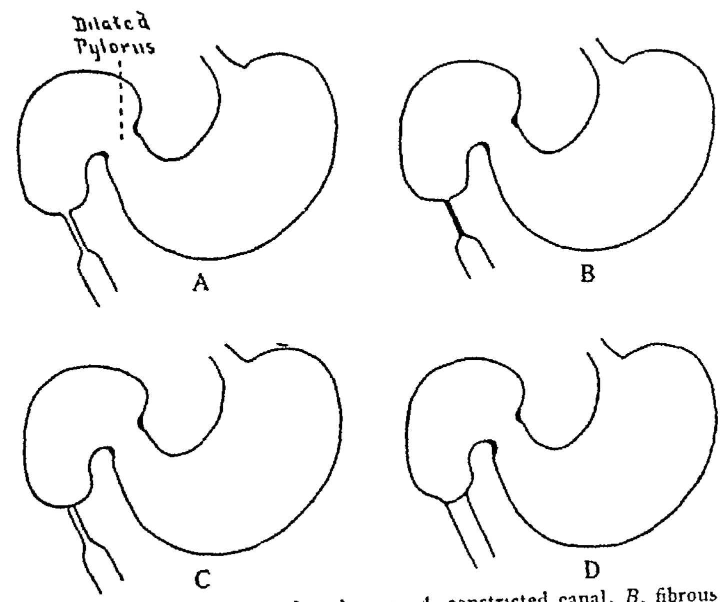

Fig 1 —Various forms of occlusion *A* constricted canal, *B*, fibrous cord, *C* blind pouch *D*, transverse membrane

The literature later has been reviewed by Meusberger[2] and Weber,[3] who found that to 1910 there had been reported between sixty and seventy cases of congenital duodenal stenosis, this number representing from one fourth to one third of the total number of cases involving all parts of the small intestine — about 200 Since 1910, several additional cases have been reported by Roe and Shaw,[4] Gray,[5] Weber[6] (who operated in his case but without success), Hauser,[7] McDonald,[8] White,[9] and others, bringing the total number up to about seventy-five

In all of the cases reported in the reviews mentioned and in the cases which we have found reported since, the condition has been fatal in from a few days to a few months at the longest [10] Kermauner[11] states that congenital stenosis of the duodenum may be of such mild grade that it is not discovered until later in life, but he cites no cases The case we have to report, therefore, is unlike any that we have been able to find described

VARIETIES OF STENOSIS

The occlusion may take any one of varied forms, but most of the cases can be grouped according to a few common types as follows

1 There is a constricted canal, lined with fairly normal intestinal mucosa (Fig 1 *A*) The occlusion is incomplete

2 A fibrous cord represents the constricted intestine It may be 1 or 2 cm in length, or may extend from the pylorus to the papilla of Vater (Fig 1 *B*)

3 The duodenum may end as a blind pouch, and the intestine begin again with a constricted lumen from the tip of this pouch, like an appendix springing from the cecum (Fig 1 *C*) Such a case is reported by Roe and Shaw [4]

4 Two cases have been reported of occlusion by a comparatively thin transverse membrane[12] (Fig 1 *D*), in one of these,[13] there were found smooth muscle fibers between the layers of epithelium, indicating the structure of actual intestinal wall in the membrane

5 The relation of the occlusion to the common duct is of interest Most of the obstructions occur in its immediate neighborhood, either above or below the papilla, though they may occur in any portion of the duodenum In four cases of partial occlusion,[1] the common duct opened into the stenosed portion Cordes also reported a case in which the blind pouch of duodenum was connected with the papilla of Vater by a small canal having the microscopic characteristics of the gallduct She found two or three similar cases reported, and considered that in several other instances such a connection must be assumed to explain the vomiting of bile-stained material in cases in which the duodenal occlusion was above the papilla No satisfactory embryologic explanation of this curious anomaly of the gallduct has been offered

The possible causes of congenital stenosis of the duodenum suggested in the literature were (1) errors of embryologic development of the duodenum, (2) volvulus in fetal life, (3) fetal peritonitis (usually tuberculous or syphilitic), (4) ulceration, (5) pressure from new growths, (6) abnormal persistence of the omphalomesenteric duct, (7) traction on the intestine, due to hernia, (8) circulatory anomalies (absence of arterial branches), (9) embolism of the superior mesenteric artery, and (10) pressure from an enlarged head of the pancreas

In forty-nine of the fifty-seven cases, no evident cause could be found except faulty development of the duodenum itself That this is the usual cause is also suggested by the most common location of the constriction, near the orifice of the common duct, that is, at about the junction of the embryonic foregut and midgut, and at a point where very active embryologic processes take place — the development of the liver and pancreas — and where other congenital anomalies (diverticula) are prone to occur Furthermore, atresia of the duodenum is frequently associated with other defects which are clearly developmental The developmental origin is also indicated by the work of Tandler and later by Forssner,[14] who found that the second portion of the duodenum, which is at first open during the latter part of the first month of embryonic life, becomes occluded by proliferation of its own epithelium, and remains so during nearly the whole of the second month It is suggested that a failure in the absorption of this occluding plug of epithelium is responsible for some of the atresias found at birth

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* From the Surgical Service of the University of California Hospital

[1] Cordes, Louise Arch Pediat, 1901, xviii, 401

[2] Meusberger Virchows Arch f path Anat, 1910, cxcix, 401

[3] Weber Med Klin, 1910, vi, 1294 and 1334

[4] Roe and Shaw Lancet London, Sept 30, 1911

[5] Gray Glasgow Med Jour, August, 1910

[6] Weber Med Klin, 1913, ix, 411

[7] Hauser Monatschr f Geburtsh u Gynak, 1911, xxxiv, No 6

[8] McDonald Am Jour Med Sc, July, 1913

[9] White Jour Obst and Gynec Brit Emp, 1912, xxi, No 4

[10] Ochsner (Ann Surg, 1906, xliii, 80) has reported a condition of thickening of the circular muscle fibers of the duodenum, which he considers to be the cause of symptoms in adult life But this condition, he stated, was constantly found below the papilla of Vater, thus differing from true congenital stenosis, which occurs with equal frequency above and below the common duct Boothby (Boston Med and Surg Jour, July 18, 1907) was unable to confirm Ochsner's findings.

[11] Kermauner Virchows Arch f path Anat, 1912, ccvii, No 3

[12] Weber (Footnote 3) Keith Brit Med Jour, Feb 5, 1910 p 301

[13] Keith (Footnote 12)

The only constant symptoms of the condition are persistent vomiting of everything ingested, beginning at birth, with emaciation and death in a few days (the symptoms being somewhat modified, of course, in the few cases of incomplete obstruction) Cases in which the obstruction was below the orifice of the common bileduct have been diagnosed during life by the passage of white meconium and the vomiting of bile-stained material

The treatment is, of course, only operative, but so far has not had success Braun[15] in 1902 collected from the literature the reports of twenty-five operations for congenital intestinal stenosis of all parts of the small intestine — enterostomies, gastro-enterostomies, and entero-anastomoses—with a mortality of 100 per cent

CASE REPORT

History —F S (U C Hospital No 8686), man aged 24, American, transferred from the medical service' of Dr H C Moffitt, presented essentially negative family and past history and habits His illness began twelve years ago at the age of 12, with a year of intermittent, rather indefinite pain in the lower abdomen, followed by three and a half years of freedom, and then four years more of similar attacks at intervals of from three to four weeks The pain was always below the umbilicus extending 5 cm to either side of the midline without radiation There was no definite relation to food It was relieved by hot drinks and occasionally by defecation It was usually worse at night

He had had no definite pain for five years, but four years ago vomiting had begun, and had grown progressively worse, usually coming after the evening meal, sometimes after other meals There had never been hematemesis or melena During this four years there had been progressively increasing weakness, with dizziness, etc His appetite had been good, but he had limited his diet through fear of vomiting finding that liquid food gave him least trouble He had lost 15 kg in the past seven years 6 kg of this during the past six months He now weighed 51 kg (112 pounds)

Physical Examination —This showed much emaciation The abdomen was scaphoid except for a prominence about the umbilicus (distended stomach), over which there was marked peristalsis from left to right The lower border of the stomach was seen and percussed midway between the umbilicus and the symphysis Liver, spleen and kidneys were not felt The reflexes were normal There was, however, a slight but definite Chvostek's sign No Trousseau's sign was made out Erb's was doubtful Physical examination otherwise was not remarkable

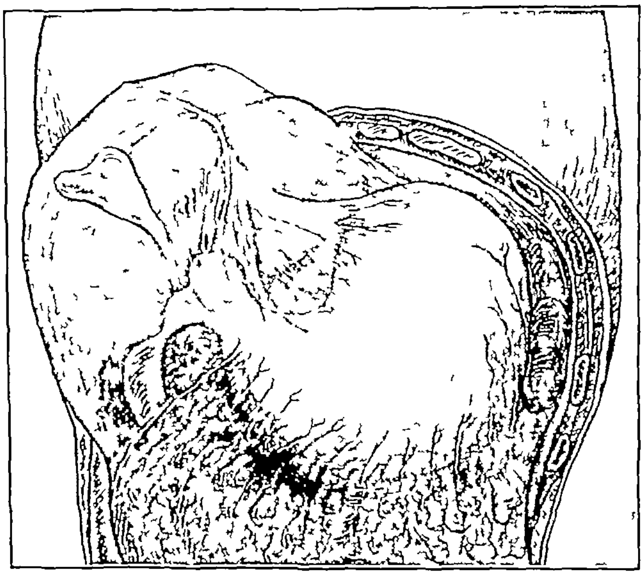
Fig 2 —Conditions found at operation (semidiagrammatic)

Wassermann test on blood serum was negative

Stomach wash, fasting, yielded 80 c c of reddish brown fluid, with free hydrochloric and lactic acid present but no occult blood Sarcinae were present in large numbers There were no Oppler-Boas bacilli

Ewald meal showed Free hydrochloric acid, 22, total acid, 42 (low normal)

Blood and urine were normal

Stool examination was negative to guaiac

Unfortunately a bismuth roentgenogram of the gastro-intestinal tract could not be obtained

A diagnosis of pyloric stenosis was made, thought to be due either to an old ulcer or to a congenital condition

Operation —The stomach was found to be much dilated and low in the abdomen There were some old adhesions across both the anterior and posterior aspects of the stomach toward the pyloric end, but none about the duodenum except two very thin strands between the pylorus and gallbladder The pyloric ring was much dilated The first portion of the duodenum was dilated, the upper wall forming a definite pouch Just distal to this dilated portion at about the junction of the first and second portions of the duodenum and above the entrance of the common duct, the intestine was evenly constricted to one third or less of its normal diameter for about 1 5 cm There was no thickening of the wall, and no scars could be found and no abnormalities of the peritoneum to account for the constriction

The gallbladder was free, not distended or thickened There was a slight constriction, causing a suggestion of sacculation of the outer third of the fundus (probably congenital)

The appendix was long atrophic and buried in old adhesions (probably the explanation of the patient's earlier attacks of pain)

A posterior gastro-enterostomy was done, and when the stomach was cut into marked thickening of the wall was noted in spite of the dilatation of the organ, indicating long-standing obstruction

The patient vomited during the first forty-eight hours following the operation, the vomitus containing considerable blood. Following this he was delirious much of the time, and on this account was given occasional nasal feedings On the fifth day he was apparently much improved and took considerable nourishment, but vomited small amounts twice during the afternoon Quite suddenly in the evening, the pulse rate increased and respirations became shallow and rapid, and he gradually sank into coma and died in six hours

Necropsy —The necropsy performed by Dr J V Cooke showed the conditions described at operation In addition there was marked dilatation of the stomach with partial breaking down of the gastro-enterostomy wound leakage of stomach contents into the peritoneal cavity, and beginning peritonitis

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[14] Forssner quoted by Keith (Footnote 12) and also by Shaw and Baldauf Albany Medical Ann 1908 xxix 148

[15] Braun Beitr z Chir 1902, xxxiv 993

When preserved in liquor formaldehydi, the constriction of the duodenum presented the appearance of an obstructing fold of the duodenal wall rather than of a narrow tube, 15 mm. long, as it had appeared before fixation. Grossly and microscopically the constriction was covered with normal mucous membrane, and careful search failed to reveal any scar tissue or other evidence of old ulceration. The condition was therefore considered to be congenital in origin, the type of occlusion corresponding to that represented in Figure 1 *A*. The possibility of the condition being caused by an old ulcer which had disappeared without leaving any trace of itself was, of course, considered, but this is quite improbable, and is all the more unlikely in view of the rarity of duodenal ulcer in early youth.

In 302 cases of ulcer of the duodenum reported by Moynihan,[16] there were but three occurring under 20, his youngest patient being aged 17. In the case here reported, symptoms of stenosis had already developed by the age of 20.

Why symptoms due to congenital duodenal stenosis should appear only after several years of life and then grow progressively worse is difficult to understand. It is possible, however, that in the process of growth the constricted portion may not have increased in diameter in proportion to the rest of the duodenum, so that the *relative* degree of obstruction was increased. Then, too, as the obstruction began to affect the patient's nourishment, dilatation and ptosis of the stomach were undoubtedly increased and, in turn, tended to aggravate the stasis, thus producing a vicious cycle.

It is of interest to compare the history of this case with those of five cases reported by Harris[17] of constriction of the duodenum by what he considered to be a congenital fold of peritoneum derived from the lower border of the embryonic ventral mesogastrium. This fold extended from the gallbladder across to the mesocolon in such a way as to constrict the duodenum at the second portion. The duodenal wall itself was normal, the lumen of normal size, and the condition was relieved in each case by dividing the constricting fold. The histories of his cases were similar to that of our case — characterized by their chronicity, symptoms beginning in youth or early adult life and growing progressively worse, with periods of improvement but not of complete freedom from distress. They presented rather indefinite epigastric distress, often with a few attacks of quite sharp pain. They differed, however, from the case here reported in that vomiting was not a characteristic symptom. The point of interest is that, if Harris is right in considering the condition to be congenital, his cases show the possibility of congenital constrictions of the duodenum causing symptoms which do not begin until after several years of life.

SUMMARY

1. Congenital duodenal stenosis is a rare condition, almost invariably fatal in infancy.

2. A case is reported in an adult, characterized by a history beginning in adolescence before the usual ulcer age and growing progressively worse, the symptoms and findings indicating benign pyloric stenosis.

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[16] Moynihan: Ulcer of the Duodenum, Ed. 2, 1912, pp. 317 and 428.

[17] Harris, M. L.: Constrictions of the Duodenum, The Journal A. M. A., April 18, 1914, p. 1211.

Influence of Digestion.—A light supper, a good night's sleep and a fine morning have often made a hero of the same man who, by indigestion, a restless night and a rainy morning would have proved a coward.—Chesterfield.

PNEUMOTHORAX OF UNCERTAIN ETIOLOGY *

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Pneumothorax is said to be spontaneous or natural when there is no evident external or internal cause. There must be a cause, but in many cases it is difficult to find and impossible to prove. The report of the following case very well illustrates these points.

History.—The patient is a man, aged 25, who has been under my observation for three years with several routine physical examinations. Nothing abnormal has been detected in heart or lungs. He was always considered a healthy, active young man. His father died of heart trouble several years ago; his mother is living and well. He has no brothers or sisters. There has been no tuberculosis or cancer in the family.

His habits are good. He has never had syphilis. He smokes a pipe four or five times daily and takes an occasional glass of beer. There has been no recent change in weight or mode of living. He has had a few colds lasting only a few days, and also some very slight digestive complaints. There is no history of infectious diseases. There has been no chronic cough, loss of weight, continued fever, night sweats or suspicion of tuberculosis. The patient complained one year ago of some pain and tenderness directly over the ensiform cartilage. This lasted three weeks unassociated with cough or fever, and was diagnosed as a strain.

Present Illness.—On the day previous to examination the patient took his usual cold shower, and without any unusual muscular or respiratory effort felt something "give way" or "grow loose" in his episternal region, inside of him. This gave him a queer indescribable sensation as of something having gone wrong. It caught him to draw a deep breath, and full inspiration was attended by a short, dry, expiratory cough. He went to bed directly, but had to lie perfectly quiet, any change in position being uncomfortable. If he attempted to rise it caught him in his back like a lumbago. He did not consider himself seriously ill, and did not feel sick, yet he believed that something had gone wrong inside of him. There was no dyspnea, nausea, chill, fever or sweat, and the patient was comfortable when quiet.

Physical Examination.—The temperature was 98.6, pulse, 80, respiration, 20. Inspection revealed a well developed young man, not sick and yet worried, somewhat pale and anxious. There was no dyspnea or cyanosis when he remained quiet, but rather marked dyspnea on the slightest exertion. The left chest was fuller than the right, the intercostal spaces bulging rather than concave, and no expansion. The right chest was normal in shape and respiratory excursion. There was no visible apex impulse to the left of the sternum but some cardiac impulse in the substernal notch. The apex impulse was not palpable. Fremitus was absent over the entire left chest, and normal over the right chest. There was no expansion of the left chest, and 1 inch expansion of the right chest. Percussion revealed a dull tympany from the apex to the base of the left chest, with no area of cardiac dulness. The right chest was normally resonant, with cardiac dulness extending 2 inches to the right of the sternum in the fourth intercostal space. Breath sounds were inaudible around the base of the left chest. About the middle of the left chest there was amphoric breathing with a metallic echo. Coin sound through the left chest gave a typical metallic click. There were no rales. Whispered voice over the entire left chest had the same amphoric character as breath sounds. The right chest was normal. There were no succussion and no metallic tinkle. Roentgenoscopy revealed the left chest full of air, the lung being displaced upward and inward, and the heart displaced slightly to the right. This slight displacement of the heart to the right did not accord with the entire absence of cardiac dulness to the left of the sternum.

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* Read before the Washington Heights Medical Society, April, 1915.

Subsequent History—One week later Temperature, pulse and respiration have always remained normal The patient has felt daily improved Pain on sitting up has become less noticeable Cough on full inspiration is less marked Physical examination has showed continuation of air in left chest, though amphoric sounds in upper chest have become fainter and fainter A few subcrepitant rales have been heard from time to time in the fourth and fifth intercostal spaces just outside the nipple line These entirely cleared There is still no appreciable expansion of the left chest, and cardiac dulness remains to the right

Two weeks later Temperature, pulse and respiration have remained normal throughout the week Left chest has regained an expansion of one-half inch Breath sounds have gradually returned to the left upper chest anteriorly and posteriorly, but are still faint with bronchovesicular character below Cardiac dulness is now elicited 3 inches to the left of the midsternal line in the fifth intercostal space, and heart sounds are now audible to the left of the sternum instead of on the right, as previously

Three weeks later Patient is feeling about normal Roentgen and physical signs show normal chest except for a very small amount of air in left costophrenic chink

Four weeks later Lungs are absolutely clear Heart is normally situated Patient is feeling fine There is no dyspnea or cough

Five weeks later Patient is normal

Six months later Patient is normal

COMMENT

The etiology of pneumothorax in this case must have been one of the following conditions

1 Generation of air within the pleural chink

2 Entrance of air from below the diaphragm or from the esophagus

3 Entrance of air through the chest wall

4 Entrance of air through the lung

In order to be generated within, there must be air-forming organisms present, in which case there would be some fluid and some infection Physical signs and roentgenoscopy show no fluid, and symptoms show no infection The sudden onset of symptoms would also be against infection

Air from below the diaphragm or a hernia would show in the roentgenogram and not heal quickly Esophageal lesion would be detected in the same manner

Air through the chest wall would necessitate some injury such as a stab wound This case shows none

There remains as the causative factor air from the lung There must, then, have been a break in the lung surface This might have been caused by injury, deformity, neoplasm or inflammation Deformity or a neoplasm would have persisted Injury to the surface of the lung would have been due to so great a difference between intrapulmonary and intrapleural pressure as to cause rupture This would not have been sufficient to rupture the lung unless there were some structural weakness brought about by some inflammatory surface lesion Such a lesion might have been tuberculous or nontuberculous Against tuberculosis are the following

No history of tuberculosis in the family, no previous history of tuberculosis in the patient, no subsequent history of tuberculosis in the patient, no symptom or localized sign of tuberculosis, no sign in the roentgenogram, and the acute condition of the case. This, therefore, leaves as the cause some inflammatory lesion of the lung surface, nontuberculous probably, very small with pin point rupture and prompt closure.

MECHANICS

The lungs are suspended within a noncollapsible chest wall They tend to collapse because of their elasticity This collapsing force equals about 4 mm of mercury at the end of expiration and about 8 mm of mercury at the end of inspiration, on forced inspiration it may fall to 30 mm of mercury So long as the glottis is open, allowing free communication with the outside air, there is no greater variation of pressure within the pleural spaces, when the glottis is closed, as in coughing or sneezing, then intrathoracic pressure is increased, also when the glottis is closed during inspiration, then intrathoracic pressure is lessened That the normal lung will stand considerable variation in pressure may be demonstrated by forcibly inflating the excised lungs of a dog with a pair of hand bellows

CONCLUSION

On taking his cold shower the patient may have suddenly taken a deep breath, thus lowering the pressure within the pleural space, rupturing a small point of the lung surface This may also have been brought about by sudden coughing or sneezing Inasmuch as the variations in pressure are not sufficient to rupture a normal lung, there was probably a small focus of nontuberculous softening on the surface of the lung While there was prompt healing of the communication between the intrapleural and intrapulmonary air, it does not seem correct to term the case spontaneous pneumothorax, any more than that a fire of unknown origin should properly be called spontaneous combustion

411 Convent Avenue

A CASE OF PHLEBITIS MIGRANS*

Carl A Hedblom, A M, M D, Shanghai, China

A married woman of 26 was in her fourth pregnancy in five years The first two babies had died of marasmus, the third was living and well The husband was in good health There had been no known tuberculosis or cancer in the family Except for measles and scarlet fever in childhood, and malaria five years before, the patient had never been ill General physical examination showed normal findings excepting for rather marked anemia

The patient did not menstruate between the last two pregnancies She presented herself for admission one week before the onset of labor because the "waters had broken" There had been only a little dribble, but it continued in small amounts until labor set in

At admission the temperature was 99.2 Labor pains had begun three hours before The abdominal tumor corresponded to that of an average sized baby in cephalic presentation Only vaginal examination was made seven hours after onset of labor The cervix was found to be three fourths dilated, and the vertex presenting in the occipitolevo-anterior position The labor progressed without incident, and a 7¼ pound baby was born at the end of the twelfth hour by normal mechanism No laceration of the perineum occurred The placenta came away after ten contractions The uterus was atonic, and in spite of ergot and massage there was rather more than the average amount of bleeding, but the pulse did not go above 90

The temperature remained between 99 and 100.2 for the first ten days of an otherwise uneventful convalescence On the eleventh day the patient had a drenching night sweat, and there was a sharp rise of temperature to 104, pulse 110 The breasts were normal, the fundus well down and not tender The white count was 17,000, hemoglobin 60 per cent There was marked tenderness and some induration over the course of the right saphenous vein, and the leg soon became swollen and edematous Treatment consisted in elevation, use of the ice bag, absolute rest, etc After three days there was a marked drop in temperature and pulse, and although the tenderness and swelling extended progressively down to the foot, there was a gradual but steady improvement until the beginning of the fourth week. At this time the temperature again rose sharply to 104.5, pulse 135, and marked tenderness, induration and swelling developed in the right thigh The patient was nauseated a great deal during the next two weeks, vomited at intervals, and complained of pain in the epigastrium much aggravated by food The pulse remained at about 130, became weak and irregular, and there was increasing prostration in spite of the fact that the swelling and tenderness in the legs all but disappeared

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* From the Hospital of the Harvard Medical School of China

During the sixth week of illness these symptoms recurred first in the left, and then in the right leg, with pain in both legs and feet, which became so severe as to prevent sleep, except after morphin By this time the patient had lost much weight and strength, and several consultants gave a very gloomy prognosis There followed, however, a period of general improvement, during which the patient was again able to take food, and for several days the pulse and temperature remained at about normal During the eighth week induration, tenderness and swelling appeared progressively over the left side of the neck, axilla, arm and left chest There was also increased swelling in the left flank and lower abdominal wall, which was spastic and very tender to palpation The swelling in both legs increased, and pain in the legs and feet became so severe as again to require the administration of morphin The temperature was from 102 to 103, the pulse from 130 to 140 and at times almost impalpable During this recrudescence which lasted about two weeks, gangrene developed over the anterior aspect of both feet, which resulted finally in the separation of the whole thickness of the skin and partial sloughing of the tendon sheaths

After another interval of improvement, there was a fourth relapse, during which the right side of the neck, right axilla and arm became involved, and then successively the occiput, whole scalp and face During the height of this attack, sharp pain developed in the chest, aggravated by deep respiration, but no friction rub or other signs were elicited There were nausea and vomiting lasting several days The voice became husky and the patient complained of severe headache, and pain in all affected parts, but most marked in the feet The symptoms abated toward the end of the tenth week, for a period of about twelve days This was followed by the sixth and last relapse, characterized by abrupt rise of temperature from normal to 102, the pulse was accelerated from 120 to 140, and again became irregular and at times almost impalpable At the beginning of this attack there was a good deal of vomiting and violent headaches The swelling in the neck and scalp, which had begun to subside, also increased After four days the patient became very drowsy, suffered lapses in memory, and finally became partially irrational for several days Ophthalmoscopic examination "Papillitis of both optic nerves Outline of both disks entirely lost Vision almost normal, but patient troubled with duplication of objects" There was no neck rigidity or abnormality of reflexes No food could be taken by mouth, but rectal alimentation was retained At the beginning of the thirteenth week the temperature fell to normal, where it remained The patient became clear mentally and began to take food From this time improvement was slow but uninterrupted The swelling and tenderness gradually disappeared except in the legs, which remained edematous for several months

During the first relapse, blood culture revealed a nonmotile spore-forming bacillus which did not correspond to *B subtilis* in its cultural characteristics An autogenous vaccine was prepared and given in large increasing doses Goat's serum was also prepared from time to time, and injected subcutaneously all without apparent effect The granulations on the feet were grafted by the Thiersch method

The patient was discharged in the nineteenth week in good general condition Nine months after the onset of the illness there was no swelling or disability, the patient was in excellent health and of maximum weight, and was able to play golf and tennis She was admitted two months after this time and an appendectomy done for subacute appendicitis

SUMMARY

In a case of phlebitis, there were involved, successively, and during the course of six fairly definite attacks, both legs, the left flank and abdomen, the chest, the axillae, the arms and hands, both sides of the neck, the scalp and the face, with eye and mental symptoms, complicated by gangrene of both feet There was complete recovery

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ABORTIVE TREATMENT OF SYPHILIS

JOSEPH J BANSBACH, M D, ST JOSEPH, MO

Oppenheim says that 80 per cent of cases of syphilis can be aborted if treatment is begun in the early stage of the chancre, three or four weeks after infection, when spirochetes are positive, the Wassermann test negative, and no glandular enlargement and chancre can be excised If the chancre is not excised, only 30 per cent can be aborted The abortive treatment consists of four injections of salvarsan and twelve injections of mercuric salicylate given weekly

For the past two years I have used the following combination to destroy the chancre when excision is not possible calomel, 10 parts, zinc sulphate, 10 parts, and chlorin water, 50 parts The combination has a selective action on the chancre, rendering the entire chancre necrotic, and has no effect on the healthy tissue It is applied on a pledget of cotton and covered with the prepuce or a piece of oiled silk and left in place for twenty-four hours In another twenty-four or thirty-six hours the chancre can be lifted out of its bed, leaving a healthy ulcer which heals in a short time under simple dressings I believe this destruction is as effective as excision

The same combination will also destroy a chancroid in one application, converting the soft chancre into a simple ulcer, and reducing the danger of a bubo to a minimum The application causes considerable smarting and swelling of the prepuce, and the patient should be informed that it will do so in order that he may not become frightened and remove the dressing

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Therapeutics

HEMORRHAGIC DISEASES

(*Continued from page 1701*)

PURPURA HEMORRHAGICA

The name purpura hemorrhagica is often loosely applied to any condition in which there are hemorrhagic spots in the skin It has been used in connection with various idiopathic purpuras such as purpura simplex, characterized by small isolated petechiae in the skin and with either no symptoms or very slight symptoms It has also been wrongly used when petechiae have been present in an arthritic condition such as Schonlein's disease or Henoch's purpura The true purpura hemorrhagica, also known as morbus maculosus of Werlhof, is a clinical entity with characteristic signs, symptoms and blood changes

Purpura hemorrhagica is usually characterized by severe small hemorrhages not only into the skin but also into and from the mucous membranes Cases have been known in which the hemorrhages were confined to the mucous membranes and were absent from the skin In this condition also occur slight or severe constitutional disturbances Fever may be present, and also nausea and vomiting The hemorrhages may be present in any of the mucous membranes, the commonest being the mucosa of the nose with resulting epistaxis There may be hemorrhages from the rectum or from the stomach The orbits and the mucosa of the mouth and throat may be studded with the petechiae In the larger number of cases the skin is involved, and the skin in no part of the body is immune from these hemorrhages The hemorrhages may be present as blebs or as petechiae of varying size

The etiology is unknown It has been attributed to changes in the blood or in the walls of the blood vessels A bacteriologic etiology has never been given much approval, although purpuric conditions have been produced by the injection of different bacteria Such purpuras are not true purpura hemorrhagica, as they are also found in infections and result from the bacteremia

The common belief has been that the disease is caused either by changes in the walls of blood vessels, probably of a degenerative nature, or by some change of the constituents of the blood Pathologic studies show that the alterations in the walls of the blood vessels are not constant Experiments have been tried to produce changes in the vessel walls by injection of toxic substances In some of these, small multiple hemorrhages have resulted, but the evidence obtained has not definitely shown these experimental conditions to be true purpura hemorrhagica There is, however, one constant change in the blood in every case of purpura hemorrhagica This has been very well demonstrated by Duke,[1] who, in a series of cases, studying various factors involved in hemorrhagic disease, found that all of the cases of purpura hemorrhagica showed a marked diminution of the blood platelets Whereas in normal cases the count is between 200,000 and 400,000, in purpura hemorrhagica it is below 10,000, many of the counts even below 1,000, and occasionally nearer zero He found the coagulation time normal and the clot at any bleeding point firm and without retraction In this way a differential diagnosis could be made from hemophilia, in which the blood platelets are normal in number but the coagulation time is delayed

Duke also noticed that the lower the blood platelet count, the more severe were the symptoms In patients with a blood platelet count of 40,000 or over, there was no tendency toward hemorrhage That blood platelets are concerned in some way or other in purpura hemorrhagica has been shown in another way by Ledingham,[2] who was able to produce in guinea-pigs a disease similar to purpura hemorrhagica by the injection of antiblood platelet serum prepared by immunizing rabbits with guinea-pig blood platelets

The conclusions drawn by Duke were substantiated when two cases were transfused directly with immediate relief, and it was concluded that the improvement was due to the increase in blood platelets Emsheimer[3] more recently reported a case of purpura hemorrhagica, in which intramuscular injections of whole blood were given with marked improvement, after other methods had failed He was led to employ this means because the injection of blood is considered to be a stimulus to the production of thromboplastic substances, and the intramuscular method is so much easier and more rapid than transfusion His method was very simple, and consisted of drawing 20 c c of blood from the median cephalic vein of the donor with a syringe and injecting it immediately into the gluteal muscle This was followed by a gradual disappearance of the petechiae and a clearing up of the urine, which had been black at times from the blood contained in it

Howard[4] obtained good results from four subcutaneous injections of whole blood in amounts varying from 28 to 90 c c

Goldstein,[5] in a case of purpura hemorrhagica with marked purpuric blotches in the mouth and spontaneous bleeding from the nose and gums, caused cessation of the bleeding by the subcutaneous injection of 20 c c of antidiphtheritic serum

Frank[6] administers arsenic in conjunction with local or intravenous injection of an extract of blood platelets The blood platelets are contained in normal human blood plasma, which is rich in them About 400 to 500 c c of blood from a donor is collected in a vessel containing herudin (an extract of leech) to prevent coagulation Ten mg of herudin are used for every 75 c c of blood The blood is placed on ice and slowly centrifugalized, after which the plasma is drawn off and used for injection This is all done under strict aseptic conditions Before it is used, blood tests should be conducted to ascertain if there is any hemolytic or agglutinative action of the prepared plasma on the patient's blood corpuscles

Bodenheimer,[7] in a severe case of purpura hemorrhagica, obtained excellent results by the intramuscular injection of horse serum He used 10 c c, and with it he administered calcium lactate in 2 grain doses, every two hours, and gave gelatin by the mouth Hemorrhagic blisters in the mouth showed a marked improvement, and the epistaxis ceased A second administration of 10 c c of horse serum caused the cessation of bleeding by rectum

Another method reported with very good results is the one described by Halpern,[8] in which coagulen is injected subcutaneously Coagulen is prepared from the blood platelets of animals It is a yellow powder, readily soluble in water and not destroyed by sterilizing It may be used intravenously or subcutaneously, and when ready for use, 1 grain is dissolved in 10 c c of distilled water

The most striking results in purpura hemorrhagica were obtained by Ottenberg and Libman[9] by means of transfusions They report nine patients in whom transfusions were made twelve times Of these six recovered completely, and one other left the hospital improved

The prompt cessation of the hemorrhages in all of the patients seemed remarkable The two cases in which there was no improvement were of an unusual form of purpura hemorrhagica, both being post partum It is very likely that their pathogenesis was different from that of the other cases

(To be continued)

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[1] Duke W W The Pathogenesis of Purpura Hemorrhagica with Especial Reference to the Part Played by Blood Platelets, Arch Int. Med November 1912 p 445

[2] Ledingham Lancet London 1914 clxxxvi 1673

[3] Emsheimer H W Intramuscular Injections of Whole Blood in the Treatment of Purpura Hemorrhagica The Journal A M A, Jan 1 1916 p 20

[4] Howard Kentucky Med Jour, 1914 xii, 606

[5] Goldstein Laryngoscope 1914 xxiv, 1

[6] Frank Berl klin Wchnschr 1915 lii 500

[7] Bodenheimer New York Med Jour, Oct 17 1914, p 774

[8] Halpern Beitr f klin Chir 1915 xcv, 324

[9] Ottenberg and Libman Am. Jour Med Sc 1915 cl, 36

Thymol.—Thymol was first obtained from thyme—whence its name Commercially it has been made almost entirely from ajowan seed This seed, which grows in northern India, is manufactured into thymol in Europe, chiefly in Germany and France. As soon as the European war broke out thymol became a scarce drug because the war prevented the importation of ajowan seed It is stated that the importations fell from 18 000 pounds in 1914 to a little more than 2 000 pounds in 1915 Now it is announced (U S Department of Agriculture, Bulletin 372) that the production of thymol may be made profitable in the United States the source being the common horsemint (*Monarda punctata*) The government bulletin describes how by cultivation the plants have been improved to a point which, it is said makes the manufacture of thymol from horsemint profitable in the United States

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SATURDAY, JUNE 3, 1916

THE RELATION OF THE SPLEEN TO HEMOLYTIC JAUNDICE

Among the positive results which have been described as a sequel to the removal of the spleen are not only an increased resistance of the red blood cells but also a decreased tendency to the jaundice that follows the destruction of these cells by hemolytic agents The spleen is regarded by many investigators as the natural location for the disintegration of erythrocytes after administration of hemolytic poisons[1] The hemoglobin there liberated is carried directly by the portal system to the liver, where it may be in large measure removed, converted into bile pigment, and thereupon excreted in the bile It is readily conceivable that if liberated hemoglobin is thus present in large quantity, some of it may escape this sequence of events, and the pigment appearing in the tissues and the urine may thus produce jaundice Inasmuch as after splenectomy the occurrence of jaundice of this sort appears to be lessened, it may be assumed that in the absence of the spleen the blood cells undergo disintegration elsewhere Their pigment could thus reach the liver indirectly only through the general circulation Traveling in this way, the free hemoglobin would tend to reach the liver much more gradually and at a rate which will lie within the capacity of the hepatic organ for complete excretion as bile pigment, hence no return of the latter into the circulation would occur, and jaundice would fail to develop

The foregoing hypothesis, of course, is not the only one which is suggested in explanation of the lessened tendency to the hemolytic jaundice after splenectomy It may be assumed that some peculiar function of blood cell destruction resides in the spleen, and is consequently lost with the removal of this organ As a matter of fact, hemolytic agents produce disintegration of erythrocytes even in splenectomized animals, though the effect is a *distinctly* lessened one These circumstances have led a group of investigators, in the department of research medicine at the University of Pennsylvania, to inquire whether or not the lessened tendency to jaundice after splenectomy is due, in part at least, to a mechanical factor dependent on the relation of the spleen to the blood supply to the liver

Splenectomy itself has no influence on the fate of hemoglobin injected into the general or portal circulation Bile pigments are formed from at least a part of it Austin and Pepper,[2] under experimental conditions in which hemoglobin was introduced into the blood stream, found that the resulting jaundice was distinctly more persistent after mesenteric than after femoral injection It will be noted that whereas the latter procedure brings the jaundice-provoking substance into the general circulation first, the former path leads directly to the liver The Philadelphia investigators therefore summarize the outcome as follows When the hemoglobin is set free in the portal circulation, a larger amount is held by the liver and converted rapidly into bile pigment than is the case when it is set free in the general circulation Through the direct portal path, overloading of the liver may thus occur more readily, and jaundice is more apt to develop

The purely mechanical influence of the path of entry to the liver must therefore be a factor in the lessened tendency, after splenectomy, to the jaundice which follows blood destruction by hemolytic agents As Austin and Pepper further remark, whether the spleen is an active factor in destroying erythrocytes, or whether it plays merely a passive part as a place for the deposition of the disintegrating cells, there can be no question that in this organ, when it is present, a large number of cells undergo their final disintegration after the action of hemolytic poisons, and that the hemoglobin there liberated passes by the portal system directly to the liver When the spleen is removed, the disintegration occurs in other organs, notably in the lymph nodes and bone marrow, and from these organs the hemoglobin passes not into the portal blood stream but into the general circulation, from which it reaches the liver more gradually and in a more dilute form

The view here presented is fortified by additional experiments in which the venous drainage of the spleen has been altered without the actual removal of this organ Krumbhaar, Musser and Peet[3] have diverted the venous outflow to the liver by the ingenious surgical device of either ligating the splenic vein or transplanting it into the vena cava, instead of removing the spleen Obviously, if the removal of the spleen as an organ furnishing some chemical hormone, is responsible for the effects of splenectomy on jaundice, the usual results obtained with hemolytic agents should not follow when the spleen is left intact in the way described But the animals with transplanted splenic circulation actually show a lessened tendency to jaundice, similar to that exhibited after simple splenectomy This experience thus serves to confirm the probability that the altered course of the blood supply to the liver plays a part in the phenomena discussed

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[1] Compare Pugliese, A and Luzzatti, T Contributo alla fisiologia della milza, milza e veleni epatici, Arch p le sc med, 1900, xxiv, 1 Pugliese, A Rate et poisons hematiques, Arch ital de biol, 1900, xxxiii, 349, La secrezione e composizione della bile negli animali smilzati, Policlinico, Sez med, 1899, vi, 121, La secretion et la composition de la bile chez animaux privés de la rate, Arch Ital de biol, 1900, xxxiii, 359

[2] Austin, J H, and Pepper, O H P The Relation of the Spleen to Blood Destruction and Regeneration and to Hemolytic Jaundice, XII The Importance in the Production of Hemolytic Jaundice of the Path of Hemoglobin to the Liver, Jour Exper Med, 1915, xxii, 675

[3] Krumbhaar, E B Musser, J H, Jr, and Peet, M M The Relation of the Spleen to Blood Destruction and Regeneration and to Hemolytic Jaundice, XIV, Changes in the Blood Following Diversion of the Splenic Blood from the Liver, A Control Study of the Effects of Splenectomy, Jour Exper Med, 1916, xxiii, 87 Krumbhaar, E B and Musser, J H, Jr The Relation of the Spleen to Blood Destruction and Regeneration, and to Hemolytic Jaundice, XV, The Resistance to Hemolytic Agents of Dogs in Which the Splenic Blood has been Diverted from the Liver, ibid, p 97

THE NONPROTEIN NITROGENOUS COMPONENTS OF THE BLOOD

If the routine detailed analysis of the blood is to prove of value in the future in the field of diagnosis, as urinary analysis has demonstrated its usefulness in the past, it will be necessary to have elaborate fundamental studies of the normal composition of the circulating fluid and its variations under known conditions of physiologic disturbance Data obtained from this standpoint in respect to the sugar content of the blood have repeatedly been discussed in The Journal[1] Since the introduction of suitable micromethods of analysis, the quantitative aspects of the nonprotein nitrogen of the blood — the index of that fraction of its constituents which includes the circulating amino acids, urea and other products of metabolism — have claimed special attention The technic of the estimations is beginning to share a place in the larger clinical laboratories and is receiving application in particular in the investigation of renal function

An elaborate investigation of the nonprotein nitrogen of the blood recently published by Bang[2] of Lund, Sweden, has brought a confirmation of some of the earlier chemical statistics of the blood as well as an addition to the known facts Thus the average figure for the total nonprotein nitrogen is placed, as the result of numerous new analyses, at 25 mg per hundred gm of blood, out of this an average of 15 mg is apportioned to urea These values correspond fairly closely with those first established in this country for man by Folin and Denis[3] The latter found results varying between the narrow ranges of from 22 to 26 mg for total nonprotein nitrogen and from 11 to 13 mg for urea nitrogen, which lead them to conclude that the perfectly normal kidney maintains a remarkably constant level of these components in the blood

It has been demonstrated that both amino acids and urea, representing food and waste, respectively, from the standpoint of nitrogenous metabolism, occur in the corpuscles as well as in the plasma of the blood,[4] the formed elements being permeable to such compounds An analogous behavior is known in the case of the blood sugar According to the newest analyses of Bang, both the corpuscles and the plasma of human blood as a rule contain practically the same content of total residual nitrogen, urea and amino acids In several instances Bang has observed an increase in the urea content of the blood without any comparable change in the other nonprotein nitrogenous constituents during starvation This was demonstrated, however, to be associated with a lack of water, and disappeared as soon as a suitable intake of water was assured The ingestion of protein did not lead, in Bang's experience, to any noteworthy concentration of amino acids in the blood unless the intake was inordinately large Evidently a renal loss of amino acids is thus averted so long as the blood content does not rise to an excretion level The urea content may be decidedly increased, however, thus showing the speedy conversion of amino acid nitrogen into its characteristic end-product of nitrogenous waste The center of interest in reactions of nitrogenous metabolism is for the time shifting to the study of the chemistry of the blood

NEW RESEARCHES ON THE BILE

Recent progress in our knowledge of the physiology of alimentation has been characterized in particular by a better insight into the mechanism of the secretion of the digestive glands For more or less obvious reasons, the production and properties of the gastric juice have experienced the greatest elucidation Pawlow's epoch-making observations have been followed by numerous others that help to make clear the functions of the various digestive secretions and the activities of the secretory apparatus which produces them

Much has been written about the physiology of the bile, but the literature of the subject still abounds in contradictory statements involving some of its fundamental features There is, accordingly, a peculiar and timely appropriateness to a renewed investigation of the problems of the bile and biliary secretion such as has lately been undertaken in the Institute of Physiology at University College, London[5] Under Starling's leadership it has been shown, contrary to widespread statements, that there is little difference in the effects, on the secretion of bile during the first six or seven hours after meals, between the diets of bread, butter and meat, if these substances are administered in quantities of corresponding caloric value In the case of bread the diminution in secretion occurs sooner than in the case of butter or meat Starvation tends to diminish the secretion of bile and the excitatory effect of feeding on the liver cells

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[3] Folin O and Denis W Protein Metabolism from the Standpoint of Blood and Tissue Analysis VI On Uric Acid Urea and Total Non Protein Nitrogen in Human Blood Jour Biol Chem 1913 xiv 29

[4] Costantino A Untersuchungen uber die biologische Bedeutung und den Metabolismus der Eiweissstoffe VII Der durch Formol titrierbare Aminosaurenstickstoff im Blutserum und in den Blutkorperchen von verschiedenen Tieren Biochem Ztschr 1913 li 91 II Der durch Formol titrierbare Aminosaurestickstoff in den Blutkorperchen und im Serum des Blutes von hungernden und ernahrten Tieren ibid 1913 lv 402 III Die Permeabilitat der Blutkorperchen fur Aminosauren ibid p 411

[5] Okada S On the Secretion of Bile Jour Physiol 1915 xlix 457 On the Contractile Movement of the Gall Bladder ibid, 1915 L 42 On the Reaction of the Bile ibid 1915 L 114

Precisely as special food products are now well known to have a specific effect on gastric secretion, so that meat extractives and dextrins, for example, increase the flow quite pronouncedly and can accordingly be employed in therapeutic ways, certain products also affect the biliary secretion Of white of egg, fats and oils, acids, "peptones," extract of meat, and bile salts or bile, all produce an increased secretion of a more dilute bile, with the exception of bile and bile salts, which produce a bile lighter in color but with a larger percentage of solids Among the substances eaten or introduced into the stomach, on the other hand, producing little or no effect are water, sucrose, cakes of starch and sugar, and sodium bicarbonate As in the case of the pancreas, so with the liver, secretin which finds its way into the circulation promotes the activity of the gland involved, causing in this case the secretion of a more dilute bile Familiar facts in relation to hematogenous jaundice make us ready to understand that injection of the blood pigment hemoglobin into the blood stream increases the pigments of the bile without marked change in the amount This is quite in harmony with the current view that the biliary pigments function as excretory products of hemoglobin

The therapeutic agents capable of promoting the flow of bile are still a subject of controversy About the potency of bile itself as a cholagogue there is no question When fed, as noted above, it causes an unmistakable increase in the secretion Okada[6] has arrived at the conclusion that calomel — the much vaunted drug for biliousness, whatever that may mean — is without effect on biliary secretion, thus confirming other earlier evidence of the same sort Sodium salicylate and chloral hydrate are reported to provoke biliary flow markedly, phenyl salicylate (salol), cream of tartar, and alcohol in large doses are likewise reported to be distinct stimulants, atropin causes a slight diminution of secretion

When a meal is taken, the ejection of the chyme into the duodenum is followed by an ejection of bile as the result of contractions of the gallbladder According to Okada's newest observations, during digestion there is an increase in the force of the rhythmic contractions of the gallbladder

The reaction of the different alimentary secretions is a matter of considerable physiologic significance, and about this aspect of the bile, also, the statements are anything but concordant The older methods of estimating the reaction have given way to the more exact procedure of determining true acidity or alkalinity in terms of hydrogen ion concentration It is now evident that the reaction of the bile from the gallbladder and from the liver is different, the reaction of the former is more variable and always inclining more to the acid side than that of the latter[6] Okada has pointed out that the facts that bile, in so many animals, is poured into the intestine by an orifice common to it and the pancreatic juice, and that these two fluids cooperate in their actions on the ingested foodstuffs, suggest that they must have a reaction which is optimal for their action in the processes of digestion As a matter of fact, the reaction of bile from the liver is alkaline during digestion and corresponds to that of pancreatic and intestinal juices and with the optimal point for trypsin, pancreatic lipase and erepsin

THE CAUSE OF TYPHUS FEVER

Much progress has been made in recent years in solving the problem of the cause of typhus fever Perhaps the most important demonstration from a practical point of view is the discovery by Nicolle, Ricketts and others that the disease is transmitted by the body louse The demonstration also that apes, monkeys and guinea-pigs are susceptible to the typhus virus makes it possible to conduct systematic experiments on animals, and in the course of such experiments it has been shown quite conclusively that the disease is not caused by a filterable virus as we ordinarily understand it And so the search for a bacterial cause has continued

In 1914, Plotz described a gram-positive anaerobic bacillus obtained in culture of the blood from patients with endemic typhus in New York and of typhus fever in immigrants in quarantine The medium consisted of glucose agar and unheated, unfiltered ascitic fluid with a specific gravity of about 1 015 Subsequently the same bacillus was recovered from guinea-pigs and monkeys inoculated with typhus blood, and specific agglutination and complement fixation obtained with the blood typhus patients after the crisis The evidence is consequently strongly in favor of at least some close relationship between this bacillus — the *Bacillus typhi-exanthematici* — and typhus fever, it can hardly be asserted, however, that it has been demonstrated conclusively to be the specific cause of typhus fever It is not apparent that injections of this bacillus in animals give rise to the same reactions which occur after the injection of typhus blood, of course it must be acknowledged that failure to produce reaction and failure to protect animals against the virus in typhus blood do not necessarily imply that the bacillus is not the cause of typhus, but they make the demonstration of the true relation of this bacillus to typhus fever difficult

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[6] Okada, S On the Reaction of Bile, Jour Physiol, 1915, L 114

The extensive outbreaks of typhus in European countries involved in the war, especially Serbia, would seem to offer unexcelled opportunity for the further work necessary to settle the etiologic problem of this disease, in spite of the abundance of the material, however, the conditions in war do not seem to be favorable for scientific investigation Thus we are informed that the American Red Cross Commission found it practically impossible to do systematic work during the last typhus epidemic in Serbia, and the recent work in Mexico by Olitsky[1] and others was interrupted very soon after it had been started From the latest Mexican work we see that the results again indicate the close relationship between the bacillus of Plotz and typhus, and we may hope that independent workers under favorable conditions will secure results before long of definite significance

In connection with this work on typhus we note the melancholy fact that another investigator has died from the disease Carlos E Husk died, March 20, 1915, from typhus fever contracted in the course of the work mentioned in the foregoing There is probably no disease that has claimed so many victims among physicians and nurses as typhus It is said that during twenty-five years, of 1,230 physicians attached to institutions in Ireland, 550 died of typhus Since the war, again, typhus has claimed many victims from physicians, among them, for instance, Jochmann, who was doing splendid work in the study of infectious diseases And the martyr roll of typhus now includes three American investigators who have died from typhus contracted while voluntarily investigating the disease in Mexico — Conneff of the Ohio State University expedition, Ricketts, who accomplished so much, and now Husk

FEVER-PRODUCING SUBSTANCES — PYROGENS

The scientific literature on fever, considered as a pathologic phenomenon quite independent of the ulterior cause, abounds in the rival claims of the so-called toxogenic and neurogenic theories Virchow, as early as 1853, looked on fever as a neurosis — the condition being considered analogous to a paralytic state, with a failure of the control of some physiologic processes in the organism This attitude has been attacked particularly on the ground that there is no very definite proof of the existence of special nerves which preside over the production of heat Accordingly, it has seemed more likely to many students of fever that circulating poisons affect directly all the cells of the body, so that the latter react with a febrile intensification of their metabolism[2] A peculiar significance was given to the toxogenic theory, particularly with reference to the reported results of the fever-producing effects of extracts of certain tissues and other substances, by the observations of Hort and Penfold[3] in 1911 These showed that when ordinary water, after it is sterilized, is injected intravenously into rabbits, the result is usually a short febrile reaction, whereas the injection of pure sterile water, carefully distilled from glass, fails to produce such a result This work has in the main been corroborated

Evidently, then, water may readily be contaminated with micro-organisms which produce some pyrogenic substance which is not destroyed by the heat employed in sterilization From a practical standpoint this fact has emphasized the necessity of using freshly distilled (as well as sterilized) water for the preparation of fluids for injection On the theoretical side, moreover, it suggests the existence of relatively stable substances which must require a dosage extremely small at best to produce febrile responses independent of the introduction of living organisms into the body

In harmony with this are the more recent experiments of Jona[4] at the Lister Institute in London From *Bacillus coli* he obtained a substance of remarkable potency On injection in a minimal amount of Ringer's solution, fever or collapse can be produced by it in experimental animals, a dose equivalent to 0 000004 gm of bacterial bodies producing fever, and 0 002 gm producing marked collapse or even death The dosage feature becomes even more striking on contemplation of the fact that the bulk of the weight of the bacteria must be something other than the incidental pyrogenic substance yielded by them According to Jona, the substance or substances in the bacteria responsible for the rise in temperature are either of a colloidal nature or adherent to colloids, so that they may be almost entirely removed by a collodion filter They are not destroyed in boiling water or by dry heat of 110 C (230 F), and they are insoluble in organic solvents such as alcohol and ether The rise in temperature ordinarily produced by these products (in rabbits) lasts a few hours, and is principally due to a diminution in heat loss, the heat production remaining sometimes unaffected and sometimes increased

On the basis of such facts, some of the reputed pyrogenic effects attributed to a variety of substances — proteoses, enzymes, etc — may perhaps find an explanation in their association with these subtle impurities of bacterial origin Although Krehl and others have long claimed fever-producing properties for digestion products of ordinary proteins, Gibson[5] has shown that only slight, if any, pyrogenic effects are produced with carefully purified proteoses He concludes, therefore, that any rise in temperature which may have been observed is insufficient to warrant the opinion that proteoses cause the severe natural fevers If we are dealing with impurities in such reputed cases of fever-producing products, it is nevertheless possible, according to Jona, that in cases of burns to the body, substances of a nature similar to the bacterial "pyrogen" are set free and may give rise to the fever seen in milder cases as well as the collapse in the severer ones All suggestions of this character contribute to the probability of toxogenic factors which deserve wider consideration in the speculations of the future on the subject of febrile reactions

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[1] Olitsky P K. Denzer B S and Husk C E The Etiology of Typhus Fever in Mexico (Tabardillo) THE JOURNAL A M A May 27 1916 p 1692

[2] An interesting discussion of the subject will be found by Mac Callum W G Fever the Harvey Lectures 1908 1909 Philadelphia 1910 p 27

[3] Hort E C. and Penfold W J The Dangers of Saline Injections Brit. Med Jour 1911 ii 1510 A Critical Study of Experimental Fevers Proc. Roy Soc. London 1912 (B) lxxxv 174 The Pyrogenetic Properties of B Typhosus Brit. Med Jour 1912 ii 1300 Fevers Following Subcutaneous Injections editorial THE JOURNAL A. M A Dec. 14 1912 p 2156

[4] Jona J L. A Contribution to the Experimental Study of Fever Jour Hyg 1916 xv 169

[5] Gibson R. B Proteoses and Fever Philippine Jour Sc (B) 1914 viii 475

Current Comment

NONSPECIFIC FACTORS IN THE TREATMENT OF DISEASE

There is a growing interest in the scientific investigation of the nonspecific elements in recovery from infectious disease, and a close examination of clinical facts suggests that some of the therapeutic effects which have been attributed to action, specific in the sense of Ehrlich, may have resulted from physicochemical changes of a less specific and more general nature Jobling and Petersen[1] review the evidence, both clinical and laboratory, which points to the importance of nonspecific elements in biologic therapeutic reaction, and suggest that in the past we have adhered perhaps too closely to the narrow view of specificity, and have refused to consider evidence of nonspecific therapeutic results, particularly if such observations originate from clinical sources They then discuss some of the ways in which nonspecific effects become evident clinically by hyperpyrexia, by leukocytosis and by laboratory tests for changes in the serum suggesting the mobilization of ferments While this discussion is timely, a word of caution may not be amiss While it is probable that much important information will come out of this line of investigation, our present information is meager, and we must not at once cast aside all of our conceptions of specificity in disease, for it is under the guidance of these conceptions that we have made progress up to the present time Nor does it seem wise to accept clinical evidence alone as conclusive, unless confirmed by many observers under varying conditions Miller and Lusk,[2] in a paper dealing with one phase of such nonspecific therapy, report improvement lasting as long as five weeks in patients suffering from arthritis, following intravenous injections of typhoid vaccine These observations afford an example of what appears to be a favorable nonspecific therapeutic action of foreign protein It would be of interest, however, to know how permanent the improvement in these patients was, and in how many the cause of the arthritis was found and removed Finally, we must bear in mind the query propounded by Theobald Smith in another connection How much energy does a reaction of this sort cost the patient, and is the final result worth the cost?

MINERS' NYSTAGMUS

In view of the enactment of the workmen's compensation laws in more than thirty states, miners' nystagmus may at any moment become of immediate interest No investigation has been made in the United States (except in Illinois) as to the existence of this disease, still less has a thorough survey been undertaken The Bureau of Mines has recently published a monograph by Frederick L Hoffman[1] in which are reviewed the various opinions as to the causation and prevention of nystagmus It is estimated that, if cases of nystagmus occurred in American mines to the same degree as they do in Europe, there should be a number of cases each year which may be estimated as between 25,000 and 40,000 It would seem improbable that such a large number could escape notice, but experience in Europe has shown that very little attention is paid to the disease until it becomes a question of compensation The conditions to which the occurrence of nystagmus are generally attributed are rare in this country These are hand undercutting, the working of extremely narrow seams, and entire dependence on the feeble light of the miners' lamp But it must be remembered that, according to Elworthy, the true determining cause is total absence of color in coal mines, combined with the fact that the majority of miners prefer to work in daytime, so that they have very little opportunity for relief of the retina This view is to a certain extent supported by the absence of nystagmus in miners working in mines other than coal mines under conditions which should produce nystagmus, except that the monotonous blackness is absent In this respect, it would be interesting to know what is the condition as to nystagmus of the miners of Mansfeld, whose copper seams are notoriously the thinnest in the world, and who work in inconceivably cramped quarters

GOA POWDER AND CHRYSAROBIN

Among the drugs which have increased in price since the outbreak of the war in Europe is chrysarobin, which, formerly about $3 a pound, wholesale, is now, when quoted at all, held at $6 75 a pound[2] Chrysarobin, widely used in psoriasis, is manufactured from goa or araroba powder, which is said to come entirely from the American continent — from the state of Bahia, Brazil According to a report by Consul Robert Frazer, Jr,[3] this substance is found in the form of a pulp or small solid masses, supposed to constitute a morbid growth, in crevices of the heart wood of a leguminous tree known locally as *amargoso do matto*

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[1] Jobling, J W, and Petersen, William The Nonspecific Factors in the Treatment of Disease, The Journal A M A, this issue, p 1754

[2] Miller, J L, and Lusk, F B The Treatment of Arthritis by the Intravenous Injection of Foreign Protein, The Journal, this issue, p 1756

[1] Hoffman, Frederick L Bulletin 93, Bureau of Mines.

[2] Red Book Price Lists of Druggists Circular, 1914 and 1915, and price lists of Mallinckrodt and Powers Weightman Rosengarten

[3] Frazer, Robert, Jr Commerce Reports, May 12, 1916 p 568

(*Vouacapoua* or *Andira araroba*) The yield sometimes amounts to 60 or 65 pounds a tree The trees are not cultivated, but grow abundantly in the forests, attaining great size To obtain the powder, the full-grown trees are felled and split, and the araroba deposits removed, dried and powdered The product yields about 50 per cent of chrysarobin Goa powder is dangerous to handle, Frazer says that those who work with it for any length of time, even though protected by gloves and masks with glass eyepieces, invariably lose hair, eyebrows and eyelashes, and sometimes become blind Just before the war broke out, large shipments of the powder were made to Europe According to Frazer, ample supplies are now obtainable

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST SUCH AS RELATE TO SOCIETY ACTIVITIES NEW HOSPITALS EDUCATION PUBLIC HEALTH, ETC)

COLORADO

Successful Campaign for Society—The Denver and County Medical Society started, May 22, to raise $5,000 to furnish and equip its new meeting hall and library in the building now being erected for it By May 29 it had raised $5,200 for this purpose

CONNECTICUT

Personal.—Dr Edward J Lynch, Norwich, has been appointed superintendent of the sanatorium at Shelton, succeeding Dr William M Stockwell, transferred to the Hartford Institution, Dr James P McManus Stamford, of the Shelton Sanatorium has been appointed assistant at the Hartford Sanatorium, and Dr William C Schroeder, assistant at the Hartford Institute, has been transferred to the Norwich Sanatorium——Dr Simon R Klein, Norwich, has been appointed pathologist to the Arkansas State Hospital, Little Rock

New State Society Officers—The one hundred and twenty-fourth annual meeting of the Connecticut State Medical Society was held in Bridgeport, May 17 and 18, under the presidency of Dr Max Mailhouse, New Haven, whose presidential address was on the subject of 'Some Defects and Inconsistencies in Connecticut Statutes and Medicolegal Proceedings" Dr David L Edsall, professor of clinical medicine in Harvard University, delivered, by invitation, an address on "The Clinical Study of Respiration" The following officers were elected president, Dr Samuel M Garlick, Bridgeport, vice presidents, Drs George M Burroughs Danielson and John C Kendall Norfolk, secretary, Dr Marvin M Scarbrough, New Haven (reelected), treasurer, Dr Phineas H Ingalls Hartford (reelected) The next meeting will be held in New Haven, May 23 and 24, 1917

DELAWARE

New Health Boards—Dover has selected the following physicians as members of its board of health Drs L August H Bishop and Edwin S Anderson and at the meeting of the board for organization, Dr Bishop was elected president and Dr Anderson, vice president——Dr Silas C Frederick and Dr Harry M Frist have been appointed members of the Wilmington Board of Health

Epidemics in Delaware—The Seaford Board of Health, in cooperation with the town council, has established a quarantine against Laurel, where there are said to be six cases of smallpox——Wilmington, after a protracted siege has apparently conquered the epidemic of smallpox which has persisted for about six weeks, and the public schools, churches and places of amusement have been reopened——The epidemic of measles at Wilmington has been checked after 749 cases had been reported

ILLINOIS

State Leprosarium—The state board of administration announced, May 22, the establishment of the Illinois Leprosarium on the grounds of the Watertown Hospital The institution has already two occupants

Practitioners' Club Election—At the meeting of the Elgin Practitioners' Club May 15, Dr Harry E Kerch, Dundee, was elected president, Dr Howard T Knight, Jr, Elgin, secretary-treasurer, and Dr Howard K Scatliff, Elgin, chairman of the executive committee

Ambulance Company at State University—An ambulance company of the Illinois National Guard is to be organized in Urbana-Champaign, with headquarters at the University of Illinois, between the two cities Dr John C. Dallenbach, Champaign, is in charge of the project

Survey of Subnormal Projected—A survey of Illinois on the question of subnormality is to begin in a few days under the auspices of the Illinois Society for Mental Hygiene Chicago will be the center of the work, and it is expected that a year will be spent in gathering data on this question Dr Sydney Kuh, Chicago, and Dr Sidney Wilgus, Rockford, are members of the committee which has the matter in charge

New Hospital—Plans for the erection and endowment of a hospital in Highland Park have been completed, and June 8 has been selected as the date of launching the four-day campaign to raise a fund of $100,000 by popular subscriptions among residents of Highland Park, Highwood, Deerfield and a portion of Ravinia Dr Lloyd M Bergen is chairman of the executive committee, and Drs Henry S Haskin Harry B Roberts and Albert R. Sheldon are medical members of the committee

Personal.—Dr and Mrs Archie B Atchison, Oregon, and family have returned after two years spent in Alabama——Dr Morris Finkelberg, Spring Valley, was seriously injured, May 23, when his motor car plunged down a 35-foot embankment He suffered a comminuted fracture of the inferior maxilla and concussion of the brain, and is under treatment in St. Margaret's Hospital——Dr Herbert B Henkel, Springfield, has been elected president of the County Secretaries Association——Dr David B Penniman, Rockford, who has been a patient at the Rockford Hospital for several weeks has returned home, greatly improved

Indicted on Diploma Mill Charge—It is reported that, April 24, at Chicago, two indictments were voted by the April grand jury in connection with an investigation of an alleged 'diploma mill" Drs Amante Rongetti, Gastano Ronga and Amos de Feo were charged in one indictment with conspiracy to aid August Steinlage and Vincenzo Scaletta in qualifying falsely for examination by the Illinois State Board of Health, having sold them diplomas, it is said, which were stolen The other indictment alleged the operation of a confidence game In this instance Joseph Glaser, son of a Chicago physician, was jointly indicted with Drs Rongetti and Ronga

Chicago

Medical Staff at Republican Convention—Commissioner of Health Robertson announces that fifty physicians will be on duty with the Emergency Hospital staff at the Coliseum during the Republican Convention

Physician for Court of Domestic Relations—Acting on a request from Judge Newcomer of the municipal court, Health Commissioner Robertson has assigned a physician for duty in the court of domestic relations, where each day from twenty to forty infants are present, many of whom are suffering from communicable or other diseases The physician s duty will be to take up, with the mothers, the health of the children and advise the mothers how to proceed

Personal.—Dr James F Churchill announces his removal to San Diego, Calif——May 25, a banquet was tendered Dr John McLean for thirty-five years a physician of Pullman, at the Hotel Florence in that suburb The banquet was given under the auspices of the Calumet Branch of the Chicago Medical Society——Dr Orville W McMichael was the guest of the evening at the first meeting of the advisory staff of the Rockford Sanitarium, May 22 and described certain phases in the diagnosis and treatment of tuberculosis——Dr Charles Davison read a paper before the Wayne County (Mich) Medical Society, Detroit, May 22 on Bone Transplanting in Fractures ——Dr Nelson M Percy Chicago delivered an address on "Surgery Management of Pernicious Anemia before the Kalamazoo Academy of Medicine, May 23 ——Dr William A Evans delivered an address before the White County Medical Society, May 17, and in the afternoon addressed a public meeting regarding health conditions in White County

LOUISIANA

Move Against Illegal Practice—The State Board of Medical Examiners, April 19 and May 1, respectively, filed petitions asking for injunctions to prohibit F H Seeley, a truss "expert," and Dr M M Odom, McDonoghville, from further practicing medicine in Louisiana

Report on Midwifery—The State Board of Medical Examiners has recently made an extensive study of the midwifery problem The report states that "midwives attended approximately 50 per cent of the births in this country," nevertheless the investigations prove that "with few exceptions the midwife is dirty, ignorant and totally unfit to discharge the duties which she assumes" Reports show they are practicing in all states, mostly among immigrants and negro women The board concludes that the first thing necessary is to insist on their being better trained, and a school for them has been opened in New Orleans

MARYLAND

Fund for Johns Hopkins Training School—A campaign has been started among the alumnae of the Johns Hopkins Training School for Nurses to help raise an endowment fund of $500,000 More than $1,700 was raised at the annual meeting of the alumnae of the training school, and $8,000 had already been pledged to this fund, making the total $9,700

Legal Recognition of National Board—What appears to be the first legislative action giving recognition to the National Board of Medical Examiners appears in an amendment secured recently to the medical practice act of Maryland This amendment provides for the licensing without examination of applicants who present certificates issued by the national board

Personal—Dr Howard A Kelly will sever his connection at the Johns Hopkins Hospital for a year, in order to devote all of his time to further research work in radium ——Dr Thomas S Cullen will be in charge of Dr Kelly's classes in the gynecologic department ——Dr Martin F Sloan, superintendent of the Eudowood Sanitarium, Towson, has opened offices in Baltimore for the private practice of medicine He will limit his practice to diseases of the chest ——Dr Frederick Williams has been appointed health warden of the fourth ward of Baltimore, succeeding Dr John F Byrne, resigned

MASSACHUSETTS

Cornerstone Laid—The cornerstone of the new Winchester Hospital was laid recently with impressive ceremonies by Governor McCall During the exercises it was announced that a gift of $50,000 had been received from George Harrington, a resident of Winchester, the hospital association to have the interest on that sum for two years and if, at the expiration of that time, the mortgage of $15,000 has been paid off, the principal will be turned over to the association The building will contain two wards with eight patients each, private rooms and operating and maternity departments and, equipped, will cost about $67,000

Personal—Dr Howard S Holloway, Boston, announces that his reported appointment as bacteriologist of the state board of health of Alabama was an error ——Dr Lewis M Palmer, Framingham, has been appointed medical examiner, that is, coroner of Middlesex County ——Dr Allen Greenwood, Boston, who was a member of the First Harvard Unit to serve in the war zone, has returned to Europe as a member of the Third Harvard Unit ——Drs John W Lane, Michael J Cronin, Thomas F Greene, Andrew F Downing and Herbert L C Johnson have resigned as members of the staff of St Elizabeth's Hospital, Brighton, Boston

MISSOURI

New Arrangements of Health Department—Dr Paul Paquin, health commissioner of Kansas City, announces that a new department of hygiene is to be built up, dividing the city into seventeen districts, over each of which will be placed a sanitary officer, who will have charge of all details of sanitary inspection in his district

Mental Hygiene Society Organized—The Missouri Society for Mental Hygiene was organized in St Louis, May 24 Missouri is the fifteenth state to organize such a society in affiliation with the National Committee for Mental Hygiene Mr Clifford W Beers, secretary of the national committee, was present to facilitate the organizing A committee was appointed to proceed with the completion of the organization, with Dr Malcolm A Bliss, St Louis, as chairman, and Dr Francis M Barnes, Jr, St Louis, as secretary-treasurer This society will work along the lines similar to those followed by the National Committee for Mental Hygiene and other state societies for the prevention of mental diseases and betterment of the present conditions of care and treatment of the insane and feebleminded in Missouri

St Louis

Memorial for Dr Jesse S Myer—The friends of the late Dr Jesse S Myer have raised a fund to establish a memorial for Dr Myer in the library of the St Louis University Medical School, in celebration of his graduation twenty years ago The fund now amounts to $1,181 Contributions may be sent to Dr Hanau W Loeb, 1402 South Grand Avenue.

Personal—Dr Fred T Murphy of the department of surgery of Washington University Medical School has returned from France, where he served in the American Ambulance since February ——Dr Philip A Shafer, dean of the Medical School of Washington University, has been elected secretary of the American Association of University Professors

Workmen's Compensation Law—Dr Robert M Funkhouser has been appointed a member of the executive committee having in charge the work of drafting a Workmen's Compensation Law for Missouri Dr Funkhouser will represent the Missouri State Medical Association The other members of the committee are Alroy S Philips, from the Bar Association, W C Essemueller, representing the employers, Reuben T Wood, representing the employees, and E B Thompson, representing insurance companies

Washington University Items—The Washington University Corporation announces an anonymous gift providing for a research fellowship in surgery for 1916 This fellowship has been awarded to Dr Philip R Green of the class of 1914 ——Dr Philip C Jeans has been promoted from instructor to associate in medicine, Dr Howard H Bell from assistant to instructor in pathology, Dr Charles H Danforth from associate to associate professor of anatomy, Dr Edwin A Baumgartner from instructor to associate in anatomy, Dr Louis H Hempelmann from assistant to instructor in medicine, Drs Theodore C Hempelmann and Adrien S Bleyer from assistants to instructors in pediatrics, Dr Maurice Flexner has been appointed assistant in medicine, Dr Oscar F Bradford, assistant in pathology and resident pathologist, and Drs Herbert V Wiehrauch and William T Wilkening, assistant residents.

NEBRASKA

Change in State Hospital Staff—Dr William A Danielson, Stromsburg, has been appointed third assistant physician at the Hastings State Hospital, succeeding Dr Grover C Rice, Doniphan

New State Society Officers—The forty-eighth annual meeting of the Nebraska State Medical Association was held in Omaha, May 23 to 25, under the presidency of Dr Edward W Rowe, Lincoln At the annual banquet Dr James B Herrick, Chicago, delivered an address on "Clinical Studies of Angina Pectoris" Lincoln was selected as the place of meeting for next year and the following officers were elected president, Dr William F Milroy, Omaha, vice presidents, Drs Miles S Moore, Gothenberg, and John I McGirr, Beatrice, secretary, Dr Joseph M Aikin, Omaha (reelected), treasurer, Dr Alexander S von Mansfelde, Ashland, corresponding secretary and librarian, Dr William P Wherry, Omaha (reelected) The association has its own official journal, of which Dr Irving D Cutter is editor and Dr Joseph M Aikin, Omaha, business manager

NEW YORK

Personal—Dr Freeman S O'Brien, Wappingers Falls, who disappeared on the eve of his marriage, was found, May 21, in a New York hospital suffering from concussion of the brain due to an automobile accident ——Dr Edward Torrey, president of the Olean Board of Health, has resigned

Health Officers Association—At the annual meeting of the Health Officers School Association held in Syracuse, May 12, Dr Albert L Hall, Fulton, was elected president, Dr Francis W St John, Weedsport, vice president, Dr Willis

G Babcock, Cleveland, secretary, and Dr Le Roy F Hollis, Laconia, treasurer

Dispensary Cornerstone Laid—The cornerstone of the Baden Street Dispensary, Rochester, was laid, May 15 Addresses were made by Dr William Kirk, Jr, of the United Charities, and Dr George W Goler, city health officer The occasion also celebrated the fifteenth anniversary of the founding of the Baden Street Social Settlement

Annual Conference of Sanitary Officers—This conference will be held in Saratoga Springs, June 6 to 8 The meeting will be devoted wholly to matters affecting the routine work of the health officer and opportunity will be given for the health officers to discuss their problems with the sanitary supervisors and various members of the department staff of the Albany office

Alumni Meeting—The Alumni Association of the Medical Department of the University of Buffalo held its forty-eighth annual meeting, May 30 to June 2, under the presidency of Dr Lesser Kauffman, Buffalo Dr Milton J Rosenau of Harvard University delivered the Harrington lectures, the first two on "Anaphylaxis," and the third on "Educational Public Health Service as a Career" The annual alumni oration was delivered, May 31, by Dr Charles D Aaron, Detroit, on "Chronic Intestinal Stasis from the Viewpoint of the Internist" June 1, the memorial portrait of the late Dr Roswell Park, professor of surgery in the university, was unveiled In the evening the annual alumni dinner was held at which toasts were responded to by President Rush Rhees of the University of Rochester, Herbert P Bissell and Dean McKee.

New Officers for State Society—At the one hundred and tenth annual meeting of the Medical Society of the State of New York held in Saratoga Springs, May 16, under the presidency of Dr William Stanton Gleason Newburgh, the following officers were elected president, Dr Martin B Tinker, Ithaca, vice presidents, Drs Henry L Winter, Cornwall, J Richard Kevin, Brooklyn, and Montgomery E Leary, Rochester, secretary, Dr Floyd M Crandall, New York, assistant secretary, Dr Albert E Sellenings, New York, treasurer, Dr Alexander Lambert New York (reelected), assistant treasurer, Dr Harlow Brooks, New York, and delegate to the American Medical Association, Dwight H Murray, Syracuse President William S Gleason in his annual address emphasized the need of preparedness and noted that, in the tentative plans drawn up for enactment by Congress no attempt has been made to provide the increased military force with adequate medical attendance

New York City

New Post-Graduate Hospital Building—A gift of $100 000 from Mrs Alfred G Vanderbilt will make possible an addition to the Post-Graduate Hospital buildings The new structure will cover a twenty-foot plot adjoining the present hospital building, and will be equipped as a babies' ward This structure will be five stories in height

Babies Welfare Association Meets—This association, which is a clearing house for all the infant welfare societies in the city held its annual meeting at The New York Academy of Medicine recently The program included an address by Dr Henry L K Shaw of the state department of health, Albany, in which he compared the problems connected with infant welfare work in rural and urban communities The annual report of this association showed that there had been active cooperation among 100 organizations during the year and that more than 8 000 cases had been handled during the central office The officers chosen for the following year are honorary president Mrs Henry Villard, president Dr S Josephine Baker, secretary, Dr Reuel A. Benson, and treasurer Mrs Richard Irvin

Personal—Dr Henry H M Lyle has returned to France where he will remain for a short time in Paris in connection with the work of the French Commission for the furnishing of artificial limbs for the French wounded He will then go to the front where he will take the position of chief surgeon of the de Annel-Annel Hospital Oise——Dr H Sheridan Baketel of Brooklyn has been elected professor of preventive, medicine and hygiene in the Long Island College Hospital to succeed the late Dr Joseph H Raymond——Dr and Mrs Frederick Kammerer have returned from Scandinavia——Dr Clarence A McWilliams who has recently returned from service in the war hospitals of France gave an account of his experiences liberally illustrated by lantern slides before the Medical Society of the County of New York at its meeting May 24

OHIO

Sanitary Study of Youngstown Begins—Surg Carroll Fox, U S P H S, arrived in Youngstown, May 16, to inaugurate a survey of local sanitary conditions, working in cooperation with the public health committee appointed by the chamber of commerce, of which Dr Sidney M McCurdy is chairman

Personal.—Dr John W Kannel, Bucyrus, has left that city for Nevada County, Calif——Dr Edwin A Hamilton, Columbus, who has been with the American Red Cross unit in Germany, has returned, and delivered an address on "Hospital Experiences" at a meeting of the Wyandot County Medical Society at Upper Sandusky, May 10——Dr George W Crile, Cleveland, gave a talk before the Alumni of Creighton Medical College in Omaha, April 24——Dr Jacob A. Sargis, formerly of Columbus but more recently in Persia, has returned to the United States and is visiting in Columbus

State Society Meeting—The seventy-first annual meeting of the Ohio State Medical Association was held in Cleveland, May 17 to 19, under the presidency of Dr William E Lower, Cleveland, who, in his address, lamented the passing of the country doctor Springfield was named as the place for the 1917 meeting, and the following officers were elected president, Dr Harmon B Gibbon, Tiffin, president-elect, Dr E Otis Smith, Cincinnati, secretary-treasurer and delegate to the American Medical Association, Dr Clarence D Selby, Toledo (reelected), executive secretary, George V Sheridan, Columbus (reelected), delegate to the American Medical Association, Dr Benjamin R McClellan, Xenia, councilors, first district, Dr Robert Carothers, Cincinnati, third district, Dr William B Van Note, Lima, fifth district, Dr Milton J Lichty, Cleveland, seventh district, Dr James S McClellan, Bellaire, ninth district, Dr Joseph S Rardin, Portsmouth, and eighth district, Dr Henson M Hazelton, Lancaster, succeeding Dr William E Wright, Newark, resigned The newly created committee for medical defense consists of Dr Jacob E Tuckerman, Cleveland, Willard J Stone, Toledo, and Charles J Souther, Cincinnati

Cincinnati

New Officers—Cincinnati Medical Society, May 5 president Dr Cloyce Wilson, vice president, Dr George Hughes, secretary-treasurer, Dr Albert J Nunnamaker

New Medical College Portrayed—Dr Christian R Holmes gave a lantern demonstration of the new medical college, to be built near the General Hospital in the pathologic building of the hospital, May 16 The demonstration was given for the benefit of the faculty of the medical school

Personal—Dr Augustus Ravogli was elected president of the American Dermatological Society at its recent meeting in Washington——Dr Christian R Holmes was elected president of the American Otological Society at its annual meeting in Washington, D C, May 10——Drs Arthur E Koch, Samuel Zielonka and Ralph W Staley have applied for the position on the junior staff of the General Hospital made vacant by the resignation of Dr Guy G Giffin

OREGON

Alumni Association Meeting—The fourth annual meeting of the Alumni Association of the University of Oregon will be held in Portland June 6 to 8 The program includes clinics, scientific sessions and a banquet at the Benson Hotel The scientific sessions will be held at the Benson Dr Ben L Norden, Portland, is president of the association.

PENNSYLVANIA

Mellon Lecture—The second Mellon Lecture was delivered at the Mellon Institute Pittsburgh, May 17 by Dr Theobald Smith, who is in charge of the Departmenof Animal Pathology of the Rockefeller Institute, Princeton, N J His subject was Clinical Aspects of Naturally Acquired Resistance to Tuberculosis and Their Bearing on Preventive Measures'

Eighteen Maternity Cases Required—An official communication from the Bureau of Medical Education and Licensure of Pennsylvania states that all candidates graduated after Jan 1 1917, who seek licenses to practice medicine in Pennsylvania will be required to have attended personally not less than twelve maternity cases in their undergraduate medical course. They must also have taken in charge six additional cases during the year s internship in an approved hospital, which is also required

Personal—Dr William J Crookston, Pittsburgh, who has been a member of the American Red Cross Hospital in Budapest, Hungary, since December, 1914, has returned home after stopping in Russia and Siberia to make inspections of war hospitals and military camps——Dr and Mrs Frank P Lenahan, Wilkes-Barre, have moved to San Diego, Calif——Dr Benneville H Miller, Mohnton, is ill as the result of a slight cerebral hemorrhage——Dr Theodore L Hazlett, Pittsburgh, who has been serving with the Russian army, is reported to be ill with typhus fever——Dr Weir M Hamilton has been relieved from charge of the Pittsburgh Tuberculosis Hospital and the institution has been placed in charge of Dr Richard G Burns

Philadelphia

Alumnae Meet—The Alumnae Association of the Women's Medical College of Pennsylvania held its forty-first annual meeting at the College Building, June 1 and 2, under the presidency of Dr Elizabeth L Peck The morning sessions were devoted to business, and the afternoon sessions to scientific papers and discussions The annual reception and banquet were given on Thursday evening at the Ritz-Carlton

SOUTH DAKOTA

Hospital Notes—Dr Leonora C Mead is contemplating the construction of a new building at the State Hospital, Yankton——The Bison Hospital, Lemmon, was destroyed by fire recently——A new state tuberculosis sanatorium is to be established at Pringle in the Black Hills, which is to be known as the Black Hills Sanatorium

New State Officers—At the thirty-fifth annual meeting of the South Dakota State Medical Association held in Aberdeen, May 23 to 25, the following officers were elected president, Dr Francis M Crain, Redfield, vice presidents, Drs Herman J G Koobs, Scotland, and Daniel L Scanlan, Volga, and secretary-treasurer, Dr Robert D Alway, Aberdeen (reelected)

WEST VIRGINIA

West Virginia Physicians Elect—At the forty-ninth annual meeting of the West Virginia State Medical Association, May 16 to 18 at Wheeling under the presidency of Dr Arthur P Butt Davis, the following officers were elected president, Dr Joseph E Rader Huntington, vice presidents, Dr Wade H Young, Sistersville, Edward H Thompson, Bluefield, and Reed M Baird, Wheeling, secretary, Dr J Howard Anderson, Marytown (reelected), treasurer Dr Hugh G Nicholson, Charleston, councilors, first district, Dr James W McDonald, Fairmont, second district, Dr Cyrus H Maxwell, Morgantown, third district, Dr Morgan T Morrison, Sutton, fourth district, Dr Robert H Pepper, Huntington, fifth district, Dr Wade H St Clair, Bluefield, sixth district, Dr Peter A Haley, Charleston, delegate to the American Medical Association, Dr Chester R Ogden, Clarksburg, and alternate, Dr Benjamin B Wheeler, McKendree Fairmont was selected as the place of meeting for 1917 The association adopted resolutions setting forth the inadequacy of the existing facilities for tuberculosis patients in the state and advocated that provision be made at the State Tuberculosis Sanatorium for free beds, that wards be provided at the sanatorium for children under 15 years of age, that a state tuberculosis sanatorium for negroes be established, that county officials be prohibited from admitting cases of pulmonary tuberculosis to county almshouses, and that counties be authorized to establish local tuberculosis hospitals for the care of advanced cases

GENERAL

Salvarsan Received—A shipment of salvarsan was received in New York from Germany, May 25

Catholic Hospital Association to Meet—The Catholic Hospital Association will convene in the auditorium of the Gesu School, Milwaukee, Wis, June 7, for a three-day session

New Gynecological Officers—At the annual meeting of the American Gynecological Society held in Washington, D C May 9 to 11, under the presidency of Dr J Wesley Bovee of that city, Dr Frank F Simpson, Pittsburgh, was elected president, Dr George G Ward, Jr, New York, secretary, and Dr Brooke M Anspach, Philadelphia, treasurer

Examination Fee Waived—At a recent meeting of the National Board of Medical Examiners it was determined to waive, for the present at least, the examination fee and to charge each applicant only a nominal registration fee of $5 This will be welcome news to many of those expecting to take the examination, since the expenses without an examination fee are heavy because of railway fare and hotel bills The first examination, it is stated, will be held in Washington, beginning Oct 16, 1916 The secretary of the board is Dr J S Rodman, 2106 Walnut Street, Philadelphia

Cancer Specialists Elect Officers—At the annual meeting of the American Society for the Control of Cancer held in New York, May 18, the following officers were elected president, George C Clark, New York, vice presidents, Drs Lewellys F Barker, Baltimore, Arthur Dean Bevan, Chicago, Lewis S McMurty, Louisville, Ky, and Edward Reynolds, Boston, secretary, Thomas M DeBevoise, New York, treasurer, Howard Baine, New York, executive secretary, Curtis E Lakeman, New York, and directors, Prof C E A Winslow, New Haven, Conn, and Drs Charles J C O Hastings, Toronto, Martin F Engman, St Louis, Robert B Greenough, Boston, Joseph Ransohoff, Cincinnati, William D Haggard, Nashville, Tenn, and Palmer Findley, Omaha

Bequests and Donations—The following bequests and donations have recently been announced

Methodist Episcopal Hospital, Indianapolis, $2,000, by the will of Mrs Anna M Seger

Country Home for Convalescent Children, Chicago, $13,500, the net receipts of the patriotic war song concert recently given

Fund for Suffering Jews in the European War zone, up to May 23 $481,000

Mt Sinai Hospital, New York, $150 000, for the endowment of a department of abdominal surgery, from Charles A Winpfheimer

St Luke's Hospital, Chicago, property valued at $2,000, the income to be used for beds for poor and deserving patients and a $2,000,000 trust fund the income from which is to be used equally for the benefit of ten Illinois institutions, including the Home for Crippled Children, Chicago, the Chicago Orphan Asylum, the Old People's Home and the Episcopal Home for Aged Persons, a gift from Hobart Williams, Cheshire, Conn

Pediatric Teachers to Meet—The Association of American Teachers of the Diseases of Children will hold its tenth annual meeting at the First Presbyterian Church, Woodward and Edmund Place, Detroit, on the morning and afternoon of June 12, under the presidency of Dr Julius P Sedgwick, Minneapolis The address of the president will be on "The Pediatric Control of the New-Born Teaching Clinic" and the program will include the following papers

'An Obstetrician s View of the Pediatric Control of the Newborn Teaching Clinic," Dr Jennings C Litzenberg, Minneapolis

An Adaptation of Some of the Modern Mechanical Devices to Clinical Teaching" Dr Julius H Hess, Chicago, and a paper by Dr Isaac A Abt Chicago

'Postgraduate Teaching in Pediatrics," Dr John Lovett Morse, Boston

The Postnatal Clinic," Dr John M Dodson, Chicago

The Relative Importance from a Teaching Standpoint of the Different Branches of Children's Diseases," Dr Clifford G Grulee, Chicago

The Place of Pediatrics in the Organization of a Medical School," Dr Borden S Veeder, St Louis

Examination for Medical Corps of the Navy—The legislation now before Congress contemplates an increase in the medical corps of the navy from its present strength of 347 to approximately 500 This will materially increase the opportunity at present afforded for entering the medical corps of the navy and also the prospects and rewards for those in the service An examination will be held, June 19, to fill vacancies in the medical corps Candidates must be between 21 and 30 years of age, graduates of reputable schools of medicine, and must apply for permission to appear before an examining board The assignments to these boards, which convene in various parts of the country, will be arranged to suit the convenience of the candidates The pay of medical officers of the navy is at the rate of $2,000 per annum with ample allowances and they are rewarded in due course by the usual promotions with increase in pay and allowances Those who intend to take advantage of this opportunity should communicate promptly with the Surgeon-General, U S Navy, Navy Department, Washington, D C

FOREIGN

Our Foreign Exchanges—As is evident from our Foreign Current Literature Department, recently the German weeklies have been conspicuous by their absence Since Nos 9 or 10 of the *Berliner, Deutsche,* and Munich medical weeklies and the *Medizinische Klinik,* only No 13 of two of them and No 15 or 16 of the four have been received Some of our French exchanges have omitted certain departments recently, saying merely that the medical editor who has charge of that department "is at Verdun" No Austrian journals have been received since No 10 The numbers correspond to the numbers in this volume of The Journal, No 10 being the issue for the week of March 4, and No 16 for April 15

Homage to Professor Kitasato in Japan—Ever since Professor Kitasato resigned his office as the director of the Imperial Institute for the Study of Infectious Diseases, which had been founded and cared for, the past decade, in consequence of the amendment of the Imperial Ordinance which took place quite against his and his followers' wishes, public sympathy has been aroused to help him in completing his new enterprise in establishing an institute, which was completed in December last His merit has been appreciated and recognized by over 400 noted diplomats, statesmen, business men and others of his native province, Kumamoto, who held a meeting at the Central Terminus Hotel, April 10, at which they presented him with a medal in order to express their recognition of his achievements in promoting bacteriology, public health and medicine

The "Apotheosis" of Guido Baccelli—This is the term applied by Italian exchanges to the memorial ceremony held recently at Rome in honor of Senator and Prof Guido Baccelli, who was also prime minister at one time, and always took a leading part in the administration of the state, in medicine and in scientific innovations His son presented the state with the uniform worn by Guido Baccelli as minister, his numerous decorations from national and foreign authorities, and the souvenir medals struck off on various occasions, as when the excavations of the Roman forum were completed This work was initiated by him and conducted under his superintendence All these mementoes are to be preserved in the Capitoline Museum His obituary notice in these columns, Jan 22, 1916, p 288, states that in 1901 he had published over sixty works on different phases of medicine and anatomy Professor Maragliano is now compiling a collection of his works and letters

Discoverer of the Infectious Jaundice Spirochete Awarded Asakawa Prize—The seventeenth annual meeting of the Kitasato Institute Alumni Association was held on April 3 and 4, and at the general meeting held on the afternoon of the second day the discoverer of the cause of infectious jaundice, Professor Inada, and his assistant, Dr Ido, were awarded by Professor Kitasato the prize of the late Professor Asakawa fund The prize consisted of a gold medal and a sum of money It is offered for the best work on bacteriology, parasitology, immunology and study of infectious diseases carried out and published in Japan during the preceding year The work consisted of the discovery of the cause of the infectious jaundice which prevails endemically not only in Japan but also in other countries The causative agent has been discovered to be one of the species of spirochetes which he named *Spirochaeta icterohemorrhagica* n sp His first report appeared in the *Fukuoka Ika-Daigaku-Zasshi* (*Journal of the Medical College of Fukuoka Imperial University*) on Jan 20 1915, and is entitled "Preliminary Report on the Study of the Spirochetosis that Develops Icterus and Hemorrhages that Prevail in Japan syn Weil's disease, Febrile Jaundice or Icterous Plague"

WAR NOTES

Ambulances for War Zone—Madam Daisy Mazzuchi, who has been raising funds for the Italian Red Cross, has sailed for Italy, taking with her ten automobile ambulances which she has purchased with the money subscribed

Personal.—Dr Malcolm C Grow Philadelphia, who has recently returned after service with the American Red Cross in Russia, advocates the establishment of more Red Cross stations in Russia——Dr Wilfred T Grenfell of Labrador, who has just returned after a tour of duty in France with the Harvard unit, spoke in St Paul s Cathedral, Boston, May 14, advocating preparedness Dr Grenfell has returned for the summer to his work in Labrador

More Surgeons for German Hospitals—Units No 4 and 5 of the German-Austrian-Hungarian Relief Society were given a dinner at the Hotel LaSalle Chicago, by Drs Carl Beck, Otto L. Schmidt and L Saurenhaus Unit No 4 which sailed for Europe from New York on the *New Amsterdam*, May 27, is in charge of Dr John R McDill, Milwaukee, Wis, and the other medical members of the units are Drs Frank Hegler St Louis, Edmund H Mensing, Rochester, Minn, and Harry C Rolnick, Chicago together with four nurses This unit is assigned to duty in Germany Unit No 5, which sailed from New York on the *Frederick*, May 31, is to work in Austria and is in charge of Dr Paul F Martin Indianapolis whose assistants are Drs W H Moore Indianapolis, and Drs Jacob J Minke, and George E Kirby, Chicago, with three nurses from Chicago and one from Indianapolis

LONDON LETTER

London, May 15, 1916

The War

THE SUPPLY OF MEDICAL OFFICERS

The adoption by Parliament of conscription for all men between the ages of 18 and 41 has altered the problem of obtaining sufficient medical officers for the army Curiously, a physician cannot be compelled to serve in his professional capacity, but only as a combatant Needless to say, he is not likely to choose the latter when his services are required in the former capacity Under the enrolment scheme of the Central Medical War Committee, described in previous letters to The Journal, a pledge was given that physicians who enroll would not be called up until 75 per cent of the possible constituency had enrolled But before this percentage had been reached, the War Office asked for more medical officers, which must render the keeping of the pledge difficult unless, in order to avoid combatant service, more physicians enroll

THE DUBLIN REBELLION

The short-lived Dublin rebellion was responsible for a large number of casualties, of which 521 occurred among the soldiers police and loyal volunteers Of these 133 were fatal There is no means of estimating the casualties among the rebels, who concealed them when possible, but they must have considerably exceeded those on the other side The number of civilians reported as dead in the hospital amounted to 160 How many of these were harmless civilians shot in the streets and how many were rebels is not known, as many of the latter did not wear uniform, or may have exchanged it for civil attire A very sudden strain was imposed on the Dublin hospitals near the fighting area, to which they responded admirably One hospital, the Richmond, was seized by the rebels, and three of the visiting staff who happened to be there were kept prisoners for a whole week. The rebels brought their wounded into this hospital and removed them as soon as they could Many physicians and nurses were absent from Dublin on the Easter Monday of the outbreak, but they returned as rapidly as possible to their posts From Monday to Sunday the medical staffs worked almost incessantly, and the Red Cross and St John Ambulance organizations did splendid work in removing the wounded under fire The rebels respected the Red Cross but in the darkness men bearers were unrecognizable and fired on Then the nurses repeatedly ran out with stretchers and carried in the wounded To add to the horrors, the immense fire which devastated Sackville Street crept nearer and nearer to the Jervis Street hospital, causing great anxiety, but fortunately the building escaped In this hospital, as well as in the Mater Misericordiae, the staffs were for days virtual prisoners, because of the danger of passing through the streets Many of the hospitals were repeatedly struck by bullets, and one was threatened by the fire of a big gun, the officer in charge of which was unaware of the proximity of the hospital As the city gas supply was cut off early in the week, operative work in the hospitals was rendered very difficult One ambulance worker was killed and also one nurse, and three army surgeons were wounded One of the buildings occupied by the rebels was the Royal College of Surgeons Little damage was done, however, some of the windows were riddled by rifle and machine gun fire and some damage was done to the walls and furniture Some of the library books were taken to form barricades, and were more or less damaged The ammunition used by the rebels was of all kinds from the modern nickel-covered rifle bullets to large soft lead bullets with the point cut off, and even 12-bore cartridges filled with buckshot and slugs Some of the wounds inflicted on the military were consequently severe, especially those traversing the chest and head At the Royal City of Dublin Hospital all the wounds were washed with hypochlorite solution, and extensive wounds were left open and packed with gauze wet with hypochlorite solution, the surrounding skin being in all cases painted with tincture of iodin This treatment appears to have been successful, even extensive wounds usually healing without much sepsis Proximity to the hospitals gave the great advantage of early operation In one case a man was brought into the Royal City of Dublin Hospital within half an hour of being shot in the back, the bullet had emerged under the right costal margin He was immediately taken to the theater and the abdomen was opened the right lobe of the liver was so extensively torn that it was impossible to suture it, but by packing both the torn cavity and all around they were able to check the hemorrhage, and the patient is now recovering.

CEREBROSPINAL MENINGITIS AMONG TROOPS

An important report on the epidemic of cerebrospinal fever among the British and Canadian troops stationed in England during the latter part of 1914 has just been issued. During the years 1913 and 1914, cerebrospinal fever prevailed in this country to a somewhat greater extent than had previously been experienced, and in the first half of the year 1915 this increase assumed large proportions. In 1913, 305 cases were reported, and in 1914, 315. In 1915 the number of cases in the civil population had increased to 2,565. This increase coincided with the military mobilization of a large part of the male population. Although the disease was present in England and Wales during 1914, and before that time, it is suggested that a fresh strain of infection was brought from Canada at the end of 1914 to this country by the first Canadian contingent which came to Salisbury Plain to undergo their final military training. It appears that cases had occurred among the Canadians in their camp at Valcartier before embarkation, and that other attacks occurred among them during the voyage to this country and just after their arrival. About twenty-nine cases had been observed among the Canadian troops up to the middle of February, and twenty-five had proved fatal. The predisposition to this infection may perhaps have been increased by the unavoidable overcrowding in camp, which at first took place, as also by the occurrence of cold, wet and inclement weather, and by the unusual exertion and fatigue incidental to the military training of young recruits. No fewer than 2,290 cases were reported in the civil population from January to July, 1915, and 1,088 among the military, a total of 3,378 cases in seven months.

WOMEN PHARMACISTS

The war has caused a large increase in the number of women students of pharmacy, and at present there are as many women students as men at some of the principal schools of pharmacy. Before the war there were at the most only a few hundred women on the pharmacists' register, and very few were actually employed in shops. Now such is the demand for women assistants to take the place of young men that a woman pharmacist who advertises for an appointment receives several offers at salaries ranging from $500 to $1,000 a year.

Clean Milk

At a meeting of the National Clean Milk Society, Sir Thomas Barlow spoke on the failure of the various tests to produce a good imitation of mother's milk during the past twenty-five years, the greater number of infants' foods being deficient in fats. There should be as little tinkering as possible with food intended for children. As the sterilization of milk and the use of dried foods spread in upper class nurseries, infantile scurvy was seen. Milk should be pure, even if it was sometimes diluted or modified, but it must not be tinkered with. There must be cleanliness of the byre, the cow, the cow's food, the vessels from which it drinks, and the hands of the milker.

Mr. Wilfred Bucklet, chairman of the Council of the Society, said that within the last forty-eight hours he had had a sample of certified milk tested at the Lister Institute, which contained 12,500,000 bacteria to the cubic centimeter. After describing the dangerously unclean conditions under which milk was produced on farms, he said that he had seen a man bottling milk over a gutter and pulling the covering disks from his pocket. In New York four years ago twenty-four men were imprisoned without the option of a fine for bottling in the streets. The society was advocating the use of the score card system of dairy farm inspection by local authorities as in America, where marks were given for milking with a dry hand, among other things. This has been already introduced in Bradford and in Birmingham, and was being considered in Manchester. They were advocating that assistance should be given to owners of herds who wished to free them from tuberculosis, and they wished to induce railway companies to provide refrigerated cars to be used solely for the transportation of milk and to offer reasonable rates for the carriage of milk in bottles or other special vessels. It was sought also to make it illegal to open churns in transit and to promote compulsory annual licensing of all dairy farms and milk shops. The society was also advocating the authorization by legislation of definition of a grade of milk inferior to "certified" milk, which shall be produced from herds free from tuberculosis and contain not more than 60,000 bacteria per cubic foot.

PARIS LETTER

Paris, May 4, 1916.

The War

A NEW SOCIETY FOR MILITARY SURGEONS

In previous letters I have spoken of the formation of several societies composed of military surgeons for the discussion of medical and surgical questions raised by the war. In addition to societies of this kind connected with the armies, others have been formed in the interior. Thus, at a recent meeting of military surgeons of the sixteenth region, which includes the five departments of Herault, Aude, Lozere, Tarn and the Pyrénees-Orientales, it was decided to have a medico-chirurgical meeting twice a month at Montpellier. In view of the special object of these meetings, which is the interchange of medical and surgical knowledge particularly useful to military surgeons, the scientific side of the discussions will not be developed to the exclusion of their utilitarian aspect. It is intended the morning after each meeting to have practical lectures and demonstrations in the service of one of the "specialist" centers. In order to facilitate the attendance of the practitioners of the region at these meetings, the regional director of the public health service intends to give leave of forty-eight hours as freely as the necessities of the service will permit it. The proceedings of these meetings will be published in the *Montpellier medical*, which will reappear for this special purpose (it has ceased publication since the commencement of the war). Membership in the society will include subscription to the journal. Each member will make a small three-monthly payment, varying with his rank. This is, exclusively, to cover the cost of printing and mailing the *Montpellier médical*.

A RUSSIAN MEDICAL MISSION IN FRANCE

The union of the Russian zemstvos has sent a mission to study the general organization of the French medical service, both in the provinces and in the armies. This mission is engaged in the study of the public health service in Paris, of the Saint-Maurice school for the reeducation of cripples, of the blind asylum at Reuilly, of the convalescent home at Clignancourt and of the Pasteur Institute. It will next visit the 14th region (Lyons), and thence it will go to the front.

HELP FOR THE BLINDED VICTIMS OF THE WAR

A new organization called L'Aide aux aveugles de guerre, with headquarters at 2 Rue Balzac at Paris, has just been formed. The object is to get into touch with blinded soldiers whether reeducated or not, with a view to providing them with immediate moral and material support and also to investigate the means available to remedy as far as possible the misfortunes of these victims of the war.

VACATION ARRANGEMENTS FOR THE RED CROSS NURSES

Several owners of large hotels in Switzerland are offering to ladies of the French Red Cross accommodation at exceptionally low prices during the months of July, August and September. Under arrangements made by a committee of Swiss lady patrons, the choice of the nurses, who are to benefit by this arrangement which permits of a stay of three weeks, will be made by the French Red Cross committees. M. Gustave Ador has accepted the honorary presidency of this new organization.

VALUE OF VARIOUS DRESSINGS IN WAR SURGERY

Dr. Le Fur has communicated to the Societe de medecine de Paris his observations of eighteen months of dressings in war surgery. In the first place, with the exception of certain bullet wounds which remain aseptic throughout, war wounds are, as a rule, seriously infected and antisepsis and not asepsis is required. Simple aseptic dressings are wholly useless in the majority of such cases, especially in wounds due to shell fragments complicated by bone or joint injuries. Among the antiseptics which have given the best results in Le Für's practice are hydrogen peroxid, dilute solutions of silver nitrate (for sloughing and suppurating wounds) phenol solutions and various chlorinated solutions (Labarraque's solution and Javelle water). He advises, after thorough washing with one of these, the application of wick drains saturated with concentrated solutions. In case of excessive suppuration, free drainage, continuous aspiration and sometimes continuous irrigation are indicated; finally when the wound is well disinfected and exposed freely, wet aseptic dressings, using common salt solution, chloroform water, very dilute silver nitrate or dry dressings to hasten cicatrization (iodin and zinc peroxid). Indolent wounds should be stimulated by hot air and especially by exposure to the sun (heliotherapy) Long standing fistulas should be cauterized energetically with zinc chlorid or silver nitrate it is sometimes advisable, after scrupulous disinfection, to close them by paraffin or one of the special waxes made for this purpose, this is especially the case in bony cavities If they persist, they must be curetted or excised In case of pleural suppuration and fistula the ordinary dressing must be supplemented by ether wick drains to promote drying and especially, by respiratory gymnastics It is very important in old wounds to vary the dressing, as the benefit obtainable from one kind of dressing, frequently repeated seems to be rapidly exhausted

Death of Professor Jungfleisch

M Jungfleisch professor of organic chemistry at the College de France is dead at the age of 77 Born in Paris in 1839, Jungfleisch was for more than thirty years professor at the Ecole superieure de pharmacie de Paris His work on organic chemistry written in collaboration with Berthelot had at one time a great vogue in scientific circles Jungfleisch was a member of the chemical section of the Academie des sciences and since 1880 a member of the pharmaceutical section of the Academie de medecine

Anaphylaxis and Prophylactic Injections of Antidiphtheric Serum

The minister of the interior having requested the Academie de medecine to report to him on the accidents following the injection of antidiphtheric serum Dr Netter of the Faculte de medecine de Paris has deposited a report on this subject in which he puts the matter in its proper perspective The fear of these accidents, which is very widespread, both in the medical profession and among the people has too often formed an obstacle to the use of the serum in cases in which this was absolutely necessary Still more has it obstructed the use of antitoxin for prophylaxis It is of course, known that disagreeable sequelae and even death have been observed as the result of a single injection With injections spaced out at intervals of more than ten days these accidents are more immediate and more alarming This is the phenomenon of anaphylaxis Nevertheless, serum anaphylaxis is far less frequent and less grave in man than in the guinea-pig In children after subcutaneous injections serious results are extremely rare Only two well proved deaths are known as the result of several hundred thousand reinjections It will not be reasonable therefore because of these altogether exceptional dangers, to give up reinjections and still less, first injections Experiment has shown that in animals, which have previously received horse serum antitoxins introduced in later injections are very rapidly eliminated There has been a tendency to conclude from this that a previous injection diminishes the efficacy of new ones A study of the course of 123 cases of diphtheria occurring in persons who had previously received curative or preventive injections, has shown that there is no foundation for this apprehension The ill effects of therapeutic serums can be attenuated or warded off by various means Whenever possible for reinjection and even for first injections, one should use Besredka's method, that is to say, commence by the injections of extremely small quantities of serum

The preventive efficacy of antidiphtheric serum was fully confirmed last year in the schools of the department of the Seine where, on the initiative of Dr Dubief, 2,582 prophylactic injections were given

The Academie de médecine considering Netter's report, passed unanimously the following resolutions

1 Serious accidents caused by a first injection (serum sickness) or by a reinjection (anaphylaxis) are very rare, especially if the injection is made into the subcutaneous cellular tissue The fear of such results should never be allowed to interfere with the use of serotherapy

2 The Academie de medecine maintains with regard to the advisability of prophylactic injections of antidiphtheric serums, the opinion which it pronounced in 1902 These injections should be practiced on children in all families or institutions in which cases of diphtheria have occurred They should also be recommended in children's schools when diphtheria assumes an epidemic character The academie is of the opinion that concurrently with these injections disinfections isolation of the sick, and the searching for, isolation and treatment of carriers should be carried out whenever possible

Association News

THE DETROIT SESSION

Hotel Reservations

LOCAL COMMITTEE REQUESTS CONFIRMATIONS

The Committee on Arrangements for the Detroit session reports that it desires to take every precaution against errors and confusion in arranging for the accommodation of those who attend the coming annual session In order to do this the committee requests the cooperation of the physicians who have made hotel reservations and have been asked by the hotel management to confirm these It will be of assistance in guaranteeing such reservations if those who hold these will make reply to the request of the hotel management that these reservations be confirmed

In addition, the local committee will appreciate it if those who hold reservations but who will not be in attendance at this coming session will write to the subcommittee on hotels addressing Dr Rolland Parmeter, 33 East High Street Detroit, returning the slips which have been forwarded assigning hotel reservations

SPECIAL TRAIN FROM ST LOUIS TO DETROIT

The outlook is promising for a special train from St Louis to Detroit for Fellows and their wives from Missouri Arkansas Kansas Oklahoma and Texas The train will leave via the Wabash Railroad Sunday, June 11, about 6 30 p m., arriving in Detroit Monday, June 12, 7 30 a m Option of return via Chicago without additional fare, or return via lake steamer from Detroit to Chicago for $5 additional fare All passing through St Louis en route to Detroit with tickets over the Wabash Railroad are invited to reserve space on this special train Communications should be addressed to Dr Edward J Goodwin, 3517 Pine Street, St Louis

PHYSICIANS' SPECIAL LAKE CRUISE

The Steamer *South American* will leave Chicago Saturday June 10 arriving in Detroit Monday, June 12 The rate is $30 and includes transportation, meals and berth en route Chicago to Detroit also use of state room and berth and breakfast while steamer is at Detroit, June 12, 13, 14 and 15

Passengers leave steamer after breakfast Thursday morning June 15 The steamer does not return to Chicago after the meeting

The round trip rate by boat Chicago to Detroit, and rail Detroit to Chicago, is $36 80

At time reservations are made passengers may purchase one way or round trip tickets

DETROIT CLINICS

From June 7 to 12, inclusive, and on June 17, a series of clinics will be given in Detroit Those attending the Detroit Session are invited to these clinics Programs can be obtained from the Local Committee on Arrangements, 33 High Street East, Detroit

Marriages

P A Surg Cary Travers Grayson, U S Navy, to Miss Alice Gertrude Gordon of Washington in New York City, May 24

Francois John Theodorus Was M D., Chicago, to Miss Josephine Von Swartzenberg of Paterson N J, May 20

William Carl Goenne, M D, Eldridge, Iowa, to Miss Norma Otto of Davenport, May 24

Fred August Thysell M D, to Miss Myrtle Graham, both of Rhinelander, Wis May 10

Charles Stoltz M D to Miss Mary Lou Foster, both of South Bend Ind May 17

John A Tamisiea M D, to Miss Mary E. Burns, at Omaha, May 12

Deaths

Col John Leighton Phillips, M C, U S Army, Takoma Park, D C, aged 57, commanding the Walter Reed General Hospital, Takoma Park, D C, a Fellow of the American Medical Association, died in the grounds of that institution, May 23, from the effects of a gunshot wound of the heart, self-inflicted, it is believed, with suicidal intent, while despondent on account of ill health, the result of a fall three or four months before Colonel Phillips was a native of Chapel Hill, N C, was graduated from the College of Physicians and Surgeons in the City of New York in 1882, entered the army as assistant surgeon a year later, was made captain and assistant surgeon in 1888, major and surgeon in 1900, lieutenant colonel in 1908 and was promoted to colonel, April 13, 1912, and served for three years as assistant chief sanitary officer of the Isthmian Canal Commission and chief surgeon of the Ancon Hospital

John Chamberlain Hollister, M D, Pasadena, Calif, Northwestern University Medical School, Chicago, 1900, aged 43, formerly a Fellow of the American Medical Association, a member of the Medical Society of the State of California, Chicago Surgical Society and a fellow of the American College of Surgeons, formerly instructor in gynecology in his alma mater and assistant professor of gynecology and surgery in the University of California, for several years a practitioner of Chicago, surgeon to the Home for Crippled and Destitute Children, adjunct surgeon to St Luke's Hospital and surgeon to St Luke's Hospital and Dispensary, died at his home May 6, from pneumonia

Elmer M Brown, M D, Tacoma, Wash, Willamette University, Portland, Ore, 1879, aged 58, a Fellow of the American Medical Association, a member of the North Pacific Surgical Association and a Fellow of the American College of Surgeons, surgeon of United States Volunteers during the Spanish-American War with service in the Philippine Islands, at one time health officer of Tacoma and physician of Washington County, Ore, dean of the medical profession of Tacoma and prominent in civic work, died at his home, May 12, from carcinoma of the superior maxilla

Lieut Luther Mitchell Ferguson, M R C, U S Army, on duty at the Walter Reed General Hospital, Takoma Park, D C, aged 27, died, May 23, in that institution, from the effects of injuries received in a fall from his horse He was born in Chin Kiang, China, July 2, 1888, and was graduated from Harvard Medical School in 1915 He was graduated from the Army Medical School in 1916 He was a Fellow of the American Medical Association and a member of the Association of Military Surgeons of the United States

Robert Lee Bowcock, M D, Anniston, Ala, University of Virginia, Charlottesville, 1886, a member of the Medical Society of Virginia and International Association of Railway Surgeons, and formerly president of the Calhoun County (Ala) Medical Society, Board of Health, and Medical Examining Board, local surgeon of the Southern Railway and division surgeon of the Louisville and Nashville System, died at his home, May 16, from pneumonia

William Hillkowitz, M D, Cincinnati, Medical College of Ohio Cincinnati, 1888, aged 49, a Fellow of the American Medical Association, and a member of the Cincinnati Academy of Medicine, physician to the Jewish Foster Home and consulting obstetrician to the Ladies' Society for the Relief of the Sick Poor and the United Jewish Charities, died at the Bethesda Hospital, Cincinnati, May 14, from heart disease

William M Harvey, M D, Detroit, Detroit College of Medicine and Surgery, 1887, aged 52, formerly a Fellow of the American Medical Association, a member of the Michigan State Medical Society, for eight years city physician of Detroit and for twelve years a major in the Medical Corps of the Michigan National Guard, died at his home in Grosse Pointe, Mich, May 13, from cerebral hemorrhage

S M LeCrone, M D, Tacoma, Wash, Starling Medical College, Columbus, Ohio, 1878, aged 69, for five years a member of the board of health of Columbus and later assistant city physician, president of the Washington State Pharmaceutical Association in 1904, a member of the Washington Legislature in 1899 and 1903, died at his home, May 17, from arteriosclerosis

Ralph Aaron Grigsby, M D, Scottsbluff, Neb, Tulane University, New Orleans, 1905, aged 33, a Fellow of the American Medical Association, died at his home, May 5, from postpharyngeal abscess

Clarence Percival Bulson, M D, New York City, College of Physicians and Surgeons in the City of New York, 1896, aged 50, also a graduate in pharmacy, formerly a member of the staff of St Luke's and Harlem hospitals, died at his home, May 18

Frank A Jordan, M D, Pecatonica, Ill, Rush Medical College, 1864, aged 76, a veteran of the Civil War in which he served as assistant surgeon of volunteers, died at the home of his daughter in Freeport, Ill, May 15, from cerebral hemorrhage

William H Gibbins, M D, Clinton, Mo, Medical College of Ohio, Cincinnati, 1873, aged 64, a member of the Missouri State Medical Association and for many years president of the Clinton School Board, died at his home, May 15

Edward R Bragg, M D, Biloxi, Miss, Tulane University, New Orleans, 1888, aged 54, formerly a Fellow of the American Medical Association, for several years a physician in the Isthmian Canal Zone, died at his home in Biloxi, May 12

Edgar Rush Burns, M D, El Paso, Texas, Chattanooga (Tenn) Medical College, 1901, aged 41, formerly a practitioner of Cullnan, Ala, and a member of the Medical Association of the State of Alabama, died at his home, May 10

George L Hoel, M D, Fort Collins, Colo, Barnes Medical College, St Louis, 1898, aged 54, a Fellow of the American Medical Association, was killed in an automobile accident at Fort Collins, May 22

Guy Marion Black, M D., Pocahontas, Ark, College of Physicians and Surgeons, Memphis, Tenn, 1910, aged 40, a member of the Arkansas Medical Society, died at his home, May 12, from heart disease

Thomas A Welch, M D, Groesbeck, Texas, Tulane University, New Orleans, 1897, aged 46, a Fellow of the American Medical Association, died at the home of his sister in Groesbeck, May 11

John Preston Deckard, M D., Mattoon, Ill, University of Louisville, Ky, 1880, aged 59, a member of the Illinois State Medical Society, died at his home, May 13, from cerebral hemorrhage

Louis Young, Wise River, Mont, (license, Montana, 1874), for forty years a practitioner of Orleans, Vt, aged 75, died in a hospital in Butte, Mont., May 17, from malignant disease

John George Horne, Coffeyville, Kan, (license, Kansas, 1901), aged 58, a practitioner for thirty-five years, died at his home, May 16, from carcinoma of the stomach

Joseph H Jones, Fort Wayne, Ind, (license, Indiana, 1897), aged 84, for more than fifty years totally blind, died at his home, May 17, from heart disease

James Evert Simmons, M D, Rockport, W Va, University of Louisville, Ky, 1909, aged 27, died suddenly at his home, April 21, from heart disease.

James W Reader, M D, Maryhill, Wash, Rush Medical College, 1870, a veteran of the Civil War, died at his home, May 16

Norman K Morris, M D, Denver, Cleveland University of Medicine and Surgery, 1876, aged 64, died at his home May 12, from cerebral hemorrhage

Thomas Clayton McCarty, Spottsville, Ky (license, Kentucky, examination and twenty-seven years of practice, 1894), aged 76, died at his home, May 10

Frank Grider, M D, McKinney, Ky, University of Tennessee, Nashville, 1892, aged 48, died at his home, May 10, from cerebral hemorrhage

Joseph Jones, M D, Stockbridge, Mass, Eclectic Medical College of Philadelphia, 1861, aged 75, died at his home, March 20, from nephritis

Benjamin F Richards, M D, Pullman, W Va, Lincoln, Neb, Medical College, 1897, aged 81, also a druggist, died at his home, April 27

Robert A Duke, M D, Lake Charles, La, Nashville, Tenn, Medical College, 1866, aged 85, died at his home, March 21, from senile debility

Vincent H Rose, M D, Ladoga, Ind, Rush Medical College, 1869, aged more than 80, died at his home from senile debility, May 8

Hugo Speier, M D, Minneapolis, University of Minnesota, Minneapolis, 1884, aged 65, died in a hospital in Rochester, Minn, May 7

Daniel Harley Kent, Boston, (license, years of practice, Massachusetts), aged 83, died at his home, May 9

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

THE WINE OF CARDUI SUIT

(*Continued from page 1733*)

CROSS-EXAMINATION BY MR HOUGH

TESTIMONY OF DR FRANK BILLINGS (*cont*)

Q —Doctor, you are a member of the A M A, are you? *A* —I am

Q —Are you an officer of it? *A* —Not now

Q —Have you been? *A* —I was President of the American Medical Association in 1902 to 1904 and Treasurer of it, custodial treasurer—I cannot remember exactly how long but I think until 1910

Q —Are you a trustee? *A* —I am not

Q —Have you been? *A* —I have not

Q —Do you read The Journal regularly? *A* —I do

Q —Do you know when they first commenced to attack viburnum prunifolium? *A* —No I do not

Mr T J Scofield —That is objected to It is not cross-examination of anything

The Court —He has answered the question

Mr T J Scofield —All right

Mr Hough *Q* —You are familiar with the working of the Propaganda Department? *A* —You mean of the Council on Chemistry and Pharmacy? I am

Q —You know that it is attacking all proprietary medicines that are sold to the consumer?

Mr T J Scofield —That is objected to

The Court —Objection sustained Dr Billings was not asked anything about the American Medical Association on his direct examination

Mr Hough —I was under the impression that I was entitled to show the environment of the witness for the purpose of determining—

The Court —You may show his connection with the Association

Mr Hough —for the purpose of determining the value of his opinion that he has expressed If he has a prejudice, I am entitled to bring it out

The Court —He has told you that he has read the magazine of the American Medical Association

Mr Hough —I want to find out if he is familiar with the propaganda work and if he endorses the propaganda work?

Mr Walker —May I make a suggestion?

The Court —He may answer the question

Mr T J Scofield —What was the question?

(The pending question was then read)

Mr T J Scofield —There is a false assumption contained in the question

Mr Walker —This is cross-examination, and we have a right to assume things in the question, and the witness can answer as he sees fit

The Court —I think counsel has a right to object on the ground that there is an assumption of fact in the question, that is not in the case

Mr Hough —I think the witness is amply able to take care of himself and if he thinks that I have assumed something in the question that he does not want to include in his answer, he can exclude it

To which ruling of the Court the defendants etc. excepted

A —I do not know that they attack all proprietary and patent medicines The purpose of the Council on Chemistry and Pharmacy is to investigate so-called proprietary and patent medicines ' and after analysis to advise the members of the association and the other readers of The Journal that certain of those proprietary remedies are of value and that certain of them are without value

Mr Hough *Q* —What article do you know of in the Propaganda Department that states that a medicine concerning which it writes is of value?

Mr T J Scofield —I object to that as not cross-examination

The Court —Objection sustained

To which ruling of the Court the plaintiffs etc excepted

Mr Hough *Q* —Have they ever held any proprietary medicine in the Propaganda Department to be valuable?

Mr T J Scofield —I object to that as not being involved here, and not cross-examination

The Court —Objection sustained

Mr Hough —Why, that is brought out by his answer

The Court —No, he stated what the purpose was He stated that the purpose of the Propaganda Department—

Mr Walker —Don't you ordinarily tell what the purpose is the act? And if they have acted directly to the contrary of what he states is the purpose, that refutes his statement as to what the purpose is

The Court —Why, Mr Walker, if you have the magazines here, and want to introduce them you may show what the Propaganda Department has done

Mr Walker —We want an opportunity to show his information about it If he testifies that the purpose is one thing, if your Honor please and the purpose is to inform doctors what are good proprietary medicines and to condemn what they think are bad then sometime in their history they must have been able to endorse some proprietary medicine as good If they never did then the policy of the paper refutes what the witness has said

The Court —The difficulty with the question is that it is not proper cross-examination, and it does not follow at all from the answer given by the witness

Mr Loesch —What are we here for?

Mr Walker —It only goes to the attitude of the witness, that is all

Mr Hough —And usually some latitude is allowed

The Court —You may save the point

To which ruling of the Court the plaintiffs etc. excepted

Mr Hough —What was the last question?

The Court —The last question was, did the witness know of any article in The Journal of the American Medical Association that ever endorsed any proprietary medicine, The objection to that is sustained

The Witness —There are certain—

Mr Hough —Never mind, you are not now asked anything

The Witness —Beg pardon

ATTITUDE TOWARD SECRET PREPARATIONS

Mr Hough *Q* —What is your own attitude towards such medicines offered to the consumer? You are opposed to them, are you not?

Mr T J Scofield —That is objected to

The Court —He may answer that

To which ruling of the Court the defendants etc., excepted

A —Certain proprietary medicines—

Mr Hough *Q* —I am talking about those that are sold to the consumer as distinguished from those which are sold to the doctors to be dispensed on prescription *A* —No I am—

The Court —Just a minute, Mr Hough Are there any medicines that are sold to the consumer that are not sold to the doctors?

Mr Hough —There are medicines called proprietary medicines which are deemed ethical, because they are sold only to the doctors and not to the public

The Court —That was not the question

Mr Hough —Then there are certain—

The Court —Just a moment Your question assumed that there were some medicines that the consumer could buy which the doctor could not buy

Mr Hough —No There are none, of course, which the consumer can buy which the doctor cannot buy Any citizen can buy no matter what his vocation, or profession is, but I am asking the doctor with reference to his attitude about secret proprietary medicines, which are offered to the general public, whether the purchaser is a doctor or a sick woman

Q —What is your attitude toward them, you are opposed to them, aren t you? *A* —Absolutely

Q —Now when you answered the last question—

The Court —Let me interrupt the cross examination long enough to ask the doctor to explain why he is opposed to them *A* —I am opposed to any medicine that is secret

Mr Walker —May we note an exception there.

The Court —Certainly

To which ruling of the Court in propounding his question to the witness as last hereinabove appears the plaintiff etc excepted

The Witness (Continuing) —That is secret in its preparation I will not give myself, nor will I advise anyone else to take remedies the character of which I know nothing about, and a proprietary medicine that is a secret medicine is in a sense a nostrum I not only am opposed to them but I object to them, and I will do anything I could to overcome their influence.

Mr Hough —Doctor you have used Warburg's Tincture in your practice? *A* —Perhaps once or twice in my life

Q —Now you know that Warburg's Tincture was originally a secret formula medicine don t you? *A* —Yes

Q —And you know that Warburg was induced to make the formula public and then he lost the rights which he was entitled to in the medicine, and the profession adopted it, isn't that so? *A* —I do not know that

Q —Haven't you read that? *A* —No

Q —You know nothing about that? *A* —No

Q —Now, in answer to the last question—was that in the same sense in which you would say it would be bad to advise everybody in Chicago to take beefsteak once a day? *A* —No

Q —Not in that sense? *A* —No

Q —Would it be in the sense in which you would say it was bad to advise them to take any particular kind of food three times a day, because the food might agree with some, this particular kind, and disagree with others? *A* —No, not in that sense.

Q —Not in that sense? *A* —No

OXIDIZED ALCOHOL

Q —Now, it is an established fact, or a recognized fact, in your profession, isn't it, that a certain amount of alcohol is freely oxidized in the system, isn't it? *A* —It probably is

Q —And the amount of alcohol which is recognized as freely oxidized in the system is never considered dangerous, is it? *A* —I would not say that

Q —When a person taking alcohol, which has a bad effect, that is because it has not been freely oxidized in the system, isn't it? Not necessarily

Q —What do you understand by being oxidized in the system? *A* —I understand that alcohol may be burned up in the body, oxidized as we say, into carbonic acid and water The carbonic acid is thrown out through the lungs and the water is thrown out through the skin and kidneys, it is no longer alcohol It is burned up

Q —Well, doesn't that mean—I mean, doesn't the term mean that it does not throw any extra burden upon any of the organs? *A* —Not necessarily

Q —Does it in any case? *A* —Yes, sir In that term—alcohol comes under what we call carbohydrates because it is burned up into carbonic acid and water, and the effort of the body to do that may overstrain No one can say—you cannot say it won't be harmful and no one can say in any given individual how much of the alcohol you take is burned up, and how much of it may be converted into fat in his body, or how much of it may be—may go out, and exist in the tissues and irritate them

Q —In other words, you mean that there are exceptions to all rules? *A* —Yes, sir

Q —But the general rule is that there is a certain amount of alcohol which is regarded as being freely oxidized? *A* —That is its natural disposal in the body

Q —Now, when you take forty eight drops of alcohol by itself, is the physiological effect precisely the same as though you took that alcohol with five times the amount of water? *A* —Not exactly When alcohol is taken in a concentrated form, its first effect is to irritate the mucous membrane of the mouth, esophagus, the gullet and the stomach

Q —You are talking now about the 48 drops of alcohol alone? *A* —Yes, I understand the question to be whether it has the same effect, whether concentrated or diluted

Q —That is right. *A* —When concentrated, it will irritate the tissues it touches. That affects the nerves and at once, after the concentrated dose, the heart will go more rapidly for a period of a few minutes and the patient will be flushed and the temperature raised for the time being That is the first effect of concentrated alcohol

If it is diluted, dependent upon its dilution, it will have less irritating effect and, finally, the effect of both will be the same, as it reaches the blood stream and undergoes the change in the liver and in the blood stream which alcohol does But the effect, the physiological effect, would depend upon its dilution

Q —Now, is it not an accepted theory among the profession, that is, among your profession, that up to 20 per cent—that alcohol up to 20 per cent hastens the absorption of the medicines which are in it? *A* —No

Q —Is there a theory on that subject with reference to any per cent of alcohol? *A* —No, not that I know of

Q —Then you would say that alcohol in no per cent hastens the absorption of medicine? *A* —Not necessarily

Q —Does it in any case? *A* —Not that I know of

Q —Are you familiar with the Atwater and Chittenden experiments as to the physiological effect of alcohol?

Mr T J Scofield —Wait a minute, it dont make any difference whether he is familiar with it or not

The Court —He may answer

To which ruling of the Court the defendants, etc , excepted

A —I did not get the question

Mr Hough —Atwater and Chittenden *A* —I am to some degree, I have read both of them

Q —Are you familiar with Cushny's statement on those subjects? *A* —I have not read Cushny's last statement on that

Q —If they should state a contrary opinion, would it affect your opinion? *A* —Not at all

Mr T J Scofield —Wait a moment. I wish to interpose an objection there

Mr Walker —What is the matter with the question?

The Court —Go ahead, Mr Hough

To which ruling of the Court the defendants, etc., excepted

Mr Hough *Q* —You said you had not read Cushny's last statement Have you read any of his other statements? *A* —I read his first work on pharmacology, but I don't remember anything in it concerning that particular thing

Q —You mean the alcohol hastening the absorption of medicine? *A* —Yes

Q —Doctor, what combination of these two drugs named in the hypothetical question, would produce the best physiological results in amenorrhea due to anemia? *A* —What combination?

Q —Yes *A* —I don't know of any combination

Q —In any amounts? *A* —In any amounts

Q —Or in any proportion? *A* —Or in any proportion.

KNOWLEDGE OF CARDUUS BENEDICTUS

Q —Is your knowledge of carduus benedictus based upon your experience with it, or upon your reading about it? *A* —I have no experience with it

Q —Have you any knowledge on the subject at all? *A* —Only as I have read it in the literature of the Chattanooga Medicine Company

Q —Is there anything in the literature of the Chattanooga Medicine Company which says anything about carduus benedictus? *A* —No only as in that combination, as I understood it to exist.

Q —What literature of the Chattanooga Medicine Company said anything about carduus benedictus? *A* —I did not say that it said anything particularly about carduus benedictus, but about Wine of Cardui, which I understand contains carduus benedictus

Q —I asked you what knowledge you had about carduus benedictus? *A* —And I answer that I know nothing practically from my own experience about it That the only literature I have read upon it is in going over the literature of the Chattanooga Medicine Company, about the Wine of Cardui, which I understand contains carduus benedictus

Q —Well, is there any literature of the Chattanooga Medicine Company which mentions carduus benedictus? *A* —I think not

Q —Well, then, you could not have read anything about carduus benedictus in the literature of the Chattanooga Medicine Company, could you, doctor? *A* —Excepting from what I have learned of the testimony here, by reading of the testimony, the analysis of the remedy, which is said to contain carduus benedictus.

Q —Is there any part of the testimony which says that the literature of the Chattanooga Medicine Company mentions carduus benedictus? *A* —In the question, yes, sir

Q —Sir? *A* —The question, yes, sir

Q —I did not understand that. *A* —The question of the attorneys, yes sir

The Court —The hypothetical question

The Witness —The hypothetical question

Mr Hough —I am asking whether the literature—

The Court —He said there was nothing in it, he has answered that twice He said that he assumed from what he had heard that the Wine of Cardui contained carduus benedictus

Mr Hough —I did not so understand the witness, but if the Court understood it that way, we will let it go

Mr T J Scofield —That is what he said

Mr Hough —No, he said he read in the testimony a reference to carduus benedictus in the literature of the Chattanooga Medicine Company, that is what he said

The Witness —I said the testimony given here in this court

Q —Well, then, you mean you have not read anything in the literature of the Chattanooga Medicine Company about carduus benedictus? *A* —Not naming the drug as carduus benedictus

Q —Have you ever read about the drug in any medical literature? *A* —No

Q —Would your opinion as to the therapeutic value of the medicine, based we will say principally upon carduus benedictus be affected by what any medical writer would say about the therapeutic value of carduus benedictus?

Mr T J Scofield —That is objected to if the Court please

The Court —He may answer

To which ruling of the Court the defendants, etc , excepted

A —It would not

Mr Hough *Q* —In other words without knowing anything about carduus benedictus, or having read anything about carduus benedictus, you expressed the opinion that it is utterly worthless as possessing medicinal value? *A* —No, I would not say that. It might have certain tonic properties but as a curative agent of any organic disease, such as I have been interrogated about here today, I would say it is worthless under those conditions

Q —Well, but outside, doctor, of the hypothetical question, if you have had no experience with carduus benedictus, yourself, and have read nothing in medical literature about the experiences of others with it, how can you say what would or would not be its therapeutic value? *A* —Well, because neither that nor any other drug will affect the anatomical conditions about which I have been interrogated in this court

Q —That was not what I asked you, whether it would affect anatomical conditions or not The question is how could you say under those circumstances that the drug did not possess any medicinal or therapeutic value whatever? *A* —I have already qualified it by saying that I did not say that, that I said it might have certain tonic or other qualities of which I know nothing

Q —Will you eliminate from your consideration, for a moment, the statement in the hypothetical question, and answer this question outside of that, as to how you can state what the therapeutic or medicinal value of that drug would be, if you have never read of the experience of others with it, or had no experience yourself with it? *A* —I cannot answer that outside of the hypothetical question

Q —Then you mean that outside of the hypothetical question you could not express any opinion, could you? *A* —I can express an opinion concerning these conditions about which I have been interrogated

Q—I am talking now about the medicinal value or the therapeutic value of carduus benedictus? *A*—No

Q—You could not could you? *A*—No

Q—Now then do you know, for instance how much extractives 20 per cent of alcohol would take from 30 grains of carduus benedictus? *A*—No, sir

Q—Do you know how much extractives a larger amount of alcohol would take from 30 grains of carduus benedictus? *A*—I do not

Q—Do you know whether a larger amount of alcohol would take any more extractives from carduus benedictus than 20 per cent of alcohol? *A*—I do not

Q—Now the hypothetical question is based upon the assumption that the bitter principle is cnicin which is present in approximately one tenth of a grain per dose Would your opinion about the medicine be any different—I am talking now not about anatomical conditions, or its effect upon moving bones but as to the therapeutic value—if the other extractive matter other than the cnicin possessed properties which acted upon the womb and the generative organs of woman? *A*—Do I understand you to ask if the other extractives of carduus benedictus with the exception of cnicin, would—

Q—If they had the reputation of acting upon the womb of a woman, would your opinion as to the value of the medicine be different? *A*—Naturally it would and that would depend too upon what action it had upon the womb necessarily To act, assume—it may be several things

Q—A headache might be due to a menstrual disturbance might it not? *A*—It might yes

Q—If a medicine contained an ingredient which acted upon those conditions it might be a medicine which would relieve the headache that was due to those conditions might it not? *A*—It might palliate or relieve the headache for a time

Q—The word cure is used carelessly by both the laity and the profession or has been in times past, has it not? *A*—I stated that to the jury

Q—I did not hear what you said *A*—I stated that to the jury in my direct testimony

Q—That that is true? *A*—Yes.

Q—Now, there are some conditions of menstrual disturbance or inflammation in the female pelvic cavity which might cause a pain in the back of a woman might there not? *A*—Yes

Q—If a medicine contained an ingredient which had the reputation of acting upon the womb or upon the inflammation of those parts, it might be just the medicine she needed to cure that pain might it not or relieve that pain? *A*—Yes or it might not cure It might palliate. There are remedies which will relieve backache due to pelvic diseases of women which have no effect whatever upon the pelvic disease of itself and so reduce the sensation of the nervous apparatus that the woman has no conception of the ache or pain in her back

Q—Don t you think a woman would usually know whether her headache was due to some female trouble or any of the irregularities of menstruation? *A*—I do not.

Q—You do not think that she would know that? *A*—No

HEADACHE

Q—Could a woman ever know ever have a headache, which she would know the cause of? *A*—Yes

Q—What kind of a headache might she know the cause of? *A*—It is possible that a woman might so suffer knowing by examination that she had pelvic disease, like a retroversion that is a backward displacement of the womb and some other woman if it annoyed her constantly and she was tired out having headaches might have headaches because of the nervous irritation in the pelvis and she might learn to know that.

She might learn that she had a headache because she knew that she had bad eyes, and that the oculist was almost unable to fit her or the eye muscles were unbalanced and he had difficulty in fitting glasses to such an individual and she would know that her headache was due to the constant eye strain human fallibility not permitting her to be entirely fitted with glasses. So that there are conditions in which an individual can know the causes of a headache.

But, take it as a general proposition a woman is not a judge of the cause of the headache any more than a man A man or a woman cannot tell why they have headaches Even we doctors sometimes have difficulty in finding out why an individual has a headache. It takes long study

Q—If a headache in a woman comes regularly every month at her period would she not naturally understand and would not the doctor naturally suppose that it was due to the menstrual period? *A*—Yes but that does not necessarily follow that it is because she has got a disease of the pelvic organs that she has a headache. A woman is naturally more nervous at her menstrual periods, more excitable. The whole nervous apparatus is disturbed and in that very case the headache may become intensified and while she or somebody else might ascribe the headache to the menstruation it is the effect of the fundamental cause.

Q—Is there any medicine which might relieve a headache which was due to a menstrual disturbance? *A*—Yes

Q—And that would be I take it a medicine which the woman would take for the menstrual disturbance? *A*—Yes. Many do

HOME REMEDIES

Q—You said something about a woman during pregnancy taking many simple remedies at her home What kind of remedies did you mean? *A*—Oh simple household remedies She may be nauseated, and she might take a little essence of ginger or she might take a little essence of peppermint or she might apply a little mustard plaster over her stomach for a little while or she has a headache and she has through her family physician some little household remedy which she will take for it She may take a hot foot bath

Q—You have prescribed essence of ginger and peppermint under those conditions? *A*—Why, certainly, if they were—if the conditions needed them

Q—Do you know how much alcohol there was in those essences? *A*—Yes, sir

Q—How much? *A*—Well, the essence of peppermint is an essential oil that requires practically all the alcohol to hold it

Q—A very large amount of alcohol? *A*—Yes, but the essence of peppermint would be taken in a few drops, three or four

Q—How many drops? *Q*—Oh anywhere from three or five or six drops

Q—Frequently? *A*—No, about once or twice a day, or perhaps—and perhaps not again

Q—That is practically all alcohol, isn't it? *A*—Yes.

Q—And in the ginger? *A*—And ginger has also a large quantity of alcohol but the amount of those drugs taken at a time is infinitesimal, and they are not prescribed to be taken three or four times a day so that the total quantity of alcohol, taken by the individual is not much over any given period of time. It makes all the difference in the world whether you are taking alcohol of a certain big dosage or a small dosage, with regularity

Q—Well Doctor what is the largest dose of ginger you have ever prescribed essence of ginger under those conditions? *A*—Oh, usually I just simply use a few drops, because it is usually given for its sense of warmth that it causes in the stomach It has what we call a carminative action that is it stimulates the stomach to move, and the woman will belch gas or if it is in the intestines, they will pass flatus or they are relieved by it It is simply a palliative medicine, given for that purpose

PHYSICIANS PRESCRIBING ALCOHOL

Q—Do you think that alcohol given in a medicine, which a doctor prescribes has any different effect from alcohol which is taken in some home medicine that a person bought without a prescription? *A*—In single doses no but the doctor usually *prescribes* a certain *amount* with directions as to when to take it and when to *stop* The patient that buys his patent medicine' with its alcohol in it takes it of his own volition at any time he choses as much as he choses and as long as he pleases It makes all the difference in the world

Q—Well you could ignore the directions of the doctor or the patient could as well as ignore the directions on the bottle, couldn t he? *A*—He could yes

Q—*Do you know how* many of the pharmacopeial preparations containing alcohol, contain more than 48 *drops of alcohol* per dose? *A*—I do not know just how many of them I know there are a good *many of them* There are some of them contain pure alcohol some of them *contain 80* per cent *75* and 60 per cent You cannot speak of it in percentage It is put in in their making as equal parts of water and equal parts of alcohol, or two parts of alcohol and one of water three parts of alcohol and one of water or four parts of alcohol and one of water and so on so it is not exact percentage

Q—You are talking I think, about percentages I was asking you if you knew how many of the pharmacopeial preparations such as fluid extracts or tinctures contained in a dose, as laid down either in the pharmacopeia or the dispensatory, or the National Formulary, *contain* in a dose more than 48 drops of alcohol *A*—No I do not because it does not interest me. I use *so* few of any of them that I cannot spend the time to look up such a question

Q—You have used cimicifuga haven't *you*? *A*—*Very rarely*

Q—That is the fluidextract? *A*—Yes sir

Q—Well you know that each dose of that contains 57 drops of alcohol don't you? *A*—*I do not know the exact* amount of alcohol it contains but it is a drug that *is very rarely used* When it is used it is not usually used in more than 10 *or* 15 *or* 20 minim doses because it is used in mixtures with other things Therefore while it may contain—

Q—Doctor would you talk a little louder *A*—Although it may contain therefore more than 48 drops in a teaspoonful of it of the simple *drug itself* it is usually used in less dosage than that in *mixtures* and not for any length of time

Q—Did *you* ever use the fluidextract of cinchona? *A*—No sir I do not use it in that form?

Q—In what form do you use it? *A*—I usually use it in the form of a tincture

Q—How much alcohol is there in the tincture? *A*—*That has a* high percentage

Q—That has a higher percentage than the fluidextract hasn't it? *A*—It has I think it has

Q—In a dose of that how many drops of the *alcohol* would a patient get? *A*—Well if you take a teaspoonful *dose I* suppose he would get more than the 48 drops I do not know exactly but again that is not a drug that is used often. It is *only* used sometimes as a so called stomachic tonic that is as a bitter *tonic* for a period and then usually not in its plain dose but with other bitter tonics mixed up and taken as a mixture When we want *long* continued use for the effect of cinchona we use its active principle *quinin* which we can give in powder or capsule or pill having no alcohol whatever

Q—But quinin don t represent all the properties of cinchona does it? *A*—It represents the *most* valuable principle in it.

Q—It represents a *certain* active principle only don t it? *A*—And the most valuable one

Q—Isn t there a difference in medical opinion on that subject? *A*—Not at all

Q—You think not? *A*—No, sir

Q—Why do they ever prescribe cinchona then, instead of just quinin? *A*—Because of its price more than any other thing

Q—Its which? *A*—Price

Q—You mean because it is cheaper? *A*—It is very ineffectual in its effect, as compared with quinin

Q—Is there anything for which cinchona would be prescribed or used, for which quinin would not be used? *A*—No, not that I know of There is one exception I would make to that answer Some people may have uncomfortable symptoms from quinin that are produced by it, like ringing in the ears, and occasionally it makes a hive like eruption on the skin that is a peculiarity of some people in reference to quinin In that event, often, as one cannot overcome it by any other medication, or combination with it, a less effective drug like cinchonidin may be given in its place, but the strength, the comparable strength is very different, but the effect is intended to be the same

Q—Now, when you give a drug which in one dose contains more than 48 drops of alcohol, does that one dose have any bad effect or its deleterious effect? *A*—As a rule, I should say not.

Q—Now, suppose you give that three times a day, and the patient did not take it any more than three times a day, would the second or third dose have any deleterious effect? *A*—I do not know You are asking the question in so general a way that I cannot answer you definitely It would depend on the patient.

Q—Let us take a patient now in whom the 48 drops would be freely oxidized The effect of that alcohol would have passed off before the expiration of three or four hours, would it not? *A*—I cannot assume that I cannot assume that any patient, or any individual, can take 48 drops of alcohol three or four times a day and say that it will be all oxidized or that it won't do any harm, I cannot say that.

Q—Let us take one time only You have given it more than one time, haven't you? *A*—Yes

Q—Now, when you give it one time, it did not have any bad effect, did it? *A*—Not so far as I could say, but I do not know

Q—It did not produce an alcoholic habit, did it? *A*—No

Q—It did not interfere with the action of the drug which you give in it did it? *A*—I cannot conceive of answering that question I don't give a drug of that kind once If I am giving alcohol, I am giving it for a purpose

Q—You mean you are giving it more than once? *A*—Yes, if I was going to give alcohol at all

Q—I am talking about what is going to be the effect of the first dose? *A*—I don't know what the effect of the first dose is I have tried to answer and say here that alcohol acts different on different individuals as to any evil effect or good effect or no effect at all, so far as one can see

Q—When you have given any of these drugs that I have just mentioned to you, and which you said you gave in alcohol, you did not give them for the alcoholic effect did you? *A*—No

Q—You regarded the alcohol as negligible, did you not? *A*—I gave them because it is necessary to have preparations of drugs with alcohol to preserve the drug We have them given to us by our pharmacological manufacturers and our druggists, who put them up for us in that form We prescribe them in that form, disregardful usually of the alcohol in the amount which we give, excepting in that instance where if one prescribes the alcohol, you will be careful of how you are going to give it, just as you would be careful of any other habit forming drug

Q—That is, when you prescribe alcohol as alcohol *A*—No, I said these drugs containing alcohol You would have the same thought in mind

Q—Well, you say that when a drug contains the alcohol which is indicated in the pharmacopeia, it would be regarded by the profession as negligible? *A*—I cannot say what the profession might think

Q—Well, yourself then? *A*—Well, myself, the way I prescribe it, I would say that it would be negligible.

Q—When it came time to take the second dose, would there be in the patient's body any condition due to the alcohol alone? *A*—I cannot answer that question, because I am not around When I prescribe a drug that has got to be taken, it usually means for a day or two days or a week, and I am not around to see what the effect of that drug is on the patient every dose that he has taken

Q—Then you assume, as a matter of course, that where you give a drug containing alcohol in which there would be as much as 48 or more drops per dose, to be taken two or three times a day over a week, that the alcohol would not have any deleterious effect *A*—In the first place, I answer that by saying that I don't prescribe a drug that contains that amount of alcohol that I give a week at a time, and that if I did prescribe it, I probably would satisfy myself that it was not doing any harm on days subsequent to the day on which I prescribed it.

Q—Well, now, when you give a drug that contains alcohol, do you have it in mind to go and see that patient very soon, and see if the alcohol is having any deleterious effect? *A*—I don't take care of any patients, sir, except those that I see daily, except Sunday, and even Sunday—

Q—Would you mind sort of spreading your voice out this way, half way between me and the jury, so that we can both hear? I did not hear the last. *A*—All right, sir My practice of medicine lies entirely, sir, at the Presbyterian Hospital in Chicago, and in consultation with other physicians and in opinions given in the office practice, a few hours a week Consequently all patients that I have under my charge, I see practically every day

Q—But there was a time when you were in the general practice, like a country doctor *A*—No, I never was just like a country doctor

Q—I don't mean like a country doctor, but you would go around and see your patients? *A*—I used to do a large family practice, sir

Q—Of course, then, you saw your patients daily? You did not see your patients daily then, as you do in the hospital, did you? *A*—If they were very ill I did If they were not very ill I some times would not see them once a week But I am quite peculiar, if you will permit me to say that, in that I don't give very many drugs

Q—You mean that is now? *A*—No sir, my patients, many of them, are carried through under a management which does not require the use of drugs often

Q—You mean you differ in that respect from the rank and file of doctors? *A*—I do not know in what I differ from them, I do not know what the opinion or practice of some other men may be.

Q—Then why did you say you were peculiar? *A*—I am peculiar in the sense—you asked me the question whether I gave drugs every day, and whether I watched their effects every day, and if I had a family practice and did not see the patients I could not do it. I say that in many instances I did not give drugs always in such treatment

Q—Well, if all physicians do the same thing, you could not say you were peculiar in that respect? *A*—Well, I will retract the "peculiar" if you want me to

Q—I think that is a good retraction Did you give more drugs when you were in the general practice than since you have been in the hospital practice? *A*—No

Q—When you first started to practice? *A*—No

Q—You never gave any more at any time? *A*—Perhaps when I was younger and without as much experience, I may have had a little more confidence in drugs or confidence in things I would read about drugs than I have now

Q—How long did that condition continue? *A*—Oh, that is a developmental period you know, sir I could not say It has been thirty six years since I began, thirty five

PUBERTY

Q—Did I understand you to say that puberty as a rule is normal, and not pathological? *A*—Yes sir, it is a normal physiological process

Q—Is it not a fact that amenorrhea is common in puberty? *A*—No sir

Q—Did you say that you had heard Dr J Clarence Webster testify? *A*—No sir

Q—Did you read his testimony? *A*—I had that offered to me and read it

Q—Well, don't Dr Clarence Webster say that amenorrhea is common in puberty? *A*—I don't remember

Mr T J Scofield—That question I object to It don't make any difference whether he says it or not

The Court—The witness says he does not know

Mr T J Scofield—But what is the use, your Honor? It is not a proper question

The Court—I do not think it is proper

Mr Hough—What was that?

Mr T J Scofield—Your question, I say, was an improper question

Mr Hough—He said he had read the testimony here, and he said he is associated with Clarence Webster

The Court—No, he said he had been in consultation with him But what difference does it make? Dr Billings has made his statement here and if Dr Webster said something different, apparently they disagree The Jury has heard it

To which ruling of the Court the plaintiffs, etc, excepted

Mr Hough *Q*—Doctor, is your opinion on any subject ever affected by the opinion or influenced by the opinion of any other doctors? *A*—Oh, sure.

Q—Either expressed to you verbally or expressed in some book they wrote on the subject? *A*—Expressed both ways

Q—Well, suppose Dr J Clarence Webster should say that amenorrhea is common in puberty Would that affect your opinion on the subject?

Mr T J Scofield—That is objected to

The Court—He may answer

To which ruling of the Court the defendants etc, excepted

A—It would not affect my—my answer is based on my own experience It does not affect it therefore

AMENORRHEA

Mr Hough *Q*—How many cases of girls at puberty have you had, would you say, roughly, for amenorrhea? *A*—That would be difficult to answer I could not answer that definitely

Q—Well, say in the last ten years? *A*—In ten years I have not done family practice, and therefore I have not seen many, excepting as they would be admitted to the hospital Before that, with a large family practice, helping parents to bring up their children, I saw many girls, and I have seen occasionally amenorrhea, but not a constant thing, and I want to repeat what I said, that when amenorrhea occurs at puberty there is an underlying constitutional condition which prevents the development of puberty, and the word "amenorrhea" should not be used there at all.

Q—What is that? *A*—Its true function is gone

Q—You mean the term "amenorrhea" should not be applied to it? *A*—Amenorrhea is but a symptom and not a condition with a girl It is but a symptom of general conditions, as I reiterated this morning The girl may have tuberculosis, the girl may have an anemia due to a faulty development of the blood her bone marrow may not be acting right. She may have some other constitutional disease, which prevents the appearance of the menses. Every one is alarmed because it is amenorrhea in the girl, when the thing to be alarmed about is her general condition and the amenorrhea don t mean anything That a girl may be a little late in the development of puberty, or that she may be irregular at the beginning is as a rule nothing to be considered as to drugs but as to the correction of habits of life and diet and everything else

Q—Do you define amenorrhea and suppression as the same thing? *A*—Yes practically They are the same thing Amenorrhea means absence of menstruation Suppression of menstruation means absence of menstruation

Q—Suppression means the absence after it has once been established *A*—No, it is simply another word to express the same thing But amenorrhea covers the whole subject of the absence of menstruation

Q—Whether before the establishment or after the establishment of menstruation? *A*—Before or after

Q—Within what time as a rule, is menstruation established in young girls? *A*—On puberty differs in different people and different climates Among the Orientals it is early

Q—I don t mean at what age I mean is it established sometimes immediately right off suddenly? *A*—Sometimes it comes without symptoms at all the girl menstruate

Q—That would be normal? *A*—That would be normal Sometimes it will come with more or less pain dependent on the new function being established

Q—That would not be normal? *A*—It would be in a sense the normal puberty the normal menstruation

Q—Normal in the sense that she must menstruate? *A*—Normal in the sense that she must menstruate and normal in the sense that it is flowing and properly That she may have pain don t indicate that she has got anything wrong about her pelvic organs

Q—It at least indicates that it is not normal doesn t it? *A*—It does not follow that the menstruation is not normal

Q—I don t mean the menstruation— *A*—Or that the puberty is not normal That don t follow at all A girl for instance in our modern life is off at some boarding school and allowed to go into society too much at that early age and her nervous apparatus is irritable with the congestion down here although it is normal that menstruation affects the nerves of her pelvis and she has got pain there when there is not anything the matter with her at all

Q—Garments and corsets would have some effect? *A*—Regardless of everything it don t make any difference She has got pain because of her habits of life and because she does not recognize things that she ought to recognize and she has got pain because of a live battery up here (apparently indicating the head) which recognizes things that it ought not to recognize

Q—That is a condition that requires some sort of treatment doesn t it? *A*—It requires general treatment

Q—Tonic treatment? *A*—To teach parents, for one thing how to take care of their girls and to teach the girls what to do It doesn t necessarily mean medicine

Q—Not necessarily? *A*—Not necessarily

Q—But you would not exclude medicine if it was indicated? *A*—If her condition indicated that she needed something to correct the condition when I found it I would give the proper medicine

Q—And if anemia was one of those conditions— *A*—Anemia was not there. The question was asked me here if the girl had painful menstruation but was menstruating Now if you bring in anemia again, she needs something to restore that blood

Q—Well, I am doing it now When she is nervous and excitable, and has headaches without having anemia all due to the fact that she is not menstruating normally you would not give her any medicine or treatment at all? *A*—I cannot accept that statement If her headache or backache was due to her nerves or is due to the nervous condition—

Q—But I thought you said that was the condition The girl is at school she is wearing tight clothes going out into society or she don t have the fresh air that she ought to have at that period and she has this physiological condition, which you have just described? *A*—The question which I understood to be asked by you was that the girl menstruated but it was painful I tried to say to you that the pain was not necessarily indicative of any disease about her genital organs that she might well have pain with the natural congestion of the womb and ovaries at that period which she would unduly feel because of her nervous irritability due to these extraneous things that I named

Q—Let us get our bearings again Menstruation may be established suddenly and without any pain That is true isn t it? *A*—Yes sir

Q—When that occurs it is normal? That is the way it ought to occur in a state of nature ought it not? *A*—Yes

Q—Now when it don t occur that way, there is a departure from the normal condition without reference to whether it is yet pathological, it is a departure from the normal condition? *A*—It is a departure from what would be considered the normal that would come in a perfect individual without pain

Q—Now then when it is delayed in that way would you or would you not call it amenorrhea? *A*—If it is delayed for the time being no Simply delayed menstruation.

Q—Well in what case would you call it amenorrhea? *A*—When it goes on for month after month without the appearance of having had it regularly month after month suddenly a month drops out and the menses did not appear she had amenorrhea for that month

Q—Of course it is a recognized fact that it don t commence at the same age in every girl? *A*—That is right.

Q—But there is something to indicate in each girl when the time has come for her to menstruate? *A*—Yes.

Q—It is usually a little flow isn t it? *A*—No

Q—What is it? *A*—Usually the development of the other organs of the female The breasts enlarged and she rounds out in form, and her whole aspect is changed and she passes from girlhood into womanhood

Q—Well that would merely indicate that it was about the time? *A*—And then when the menstruation appears, it may be the appearance first of a flow of blood the first that she would know about it

Q—That would indicate the first month when it was due with her, wouldn t it? *A*—On the other hand, it may even with a healthy girl appear—

Q—Did the doctor answer that question?

(The pending question was then read)

A—That would indicate it, yes.

Q—Go ahead excuse the interruption *A*—It might be attended with more or less nervousness, irritability, headache or something of that kind because it is a new thing to her, and Nature has not yet got around to establishing it

Q—Now then, suppose when the month comes around she is irritable in the meantime and has headache would you say that it was then pathological? *A*—No not necessarily

Q—Would you say that it would then require any treatment at all? *A*—Not unless I made an examination of that individual and found out what the true condition was

Q—Now then, suppose the third month comes around and she is still in that condition with some headache would you give her any treatment? *A*—I would *not until I had acquainted myself* with the facts of her condition

Q—Well after you had acquainted yourself with the facts of her condition, what treatment would you give her? *A*—Then I would give the treatment based on those conditions.

Q—We will say now that it is the third month What would be some of the treatment you would give her? *A*—Well it would depend on the cause. Sometimes they are delayed *from general* constitutional things A girl may be housed in school or at home and she may not have enough out-of-door exercise On the other hand she may be a poor girl earning her living in a store or somewhere else and she is overworked and tired physically and mentally She may have faulty methods of life, as to diet and as to bowel movements and one would have to ascertain all *of those facts* and treat the patient accordingly rather than to drive at once at the pelvic organs to find what was the cause

Q—Would you wait three months to ascertain the facts? *A*—I don t wait at all, sir as a rule

Q—Then you would ascertain the fact before the expiration of three months? *A*—I would try to, if the patient were under me, yes sir

Q—How long would you then wait before you would *give her* any medicine? *A*—That would depend on what I found I cannot answer the question because you are assuming a hypothetical girl without my knowing what the matter is with her I cannot answer that question

Q—What conditions did you ever *find in a girl* at puberty which required the giving of medicine? *A*—Anemia, such as I have named is one of the most common causes She either suffers from malnutrition because of faulty habits of eating diet and *exercise* and, all that or her blood making organs are not making blood fast enough and in that event *one corrects* whatever the condition may be

Q—Let us suppose that the condition was *not* due to any malformation or any condition which required a surgical operation *A*—There is sometimes—

Q—There is *sometimes* what? *A*—A malformation

Q—Let us exclude those Suppose the condition which you discovered *her in* was not due to malformation and was not one which required a surgical operation and still the girl dribbled and had *some* pain and had headaches and was irritable and nervous Is that a *condition* which calls for any treatment? *A*—I have already *answered that in saying* that the underlying cause would have to be sought for and removed Those may be numerous I do not know what it may be.

Q—Without reference to the underlying cause could there be any underlying cause which would necessitate any treatment for that *condition of symptoms*? *A*—I have already stated that I would give iron if she had anemia and needed a tonic, or give her some other restorative tonic if iron was not needed If she had tuberculosis, we would treat that.

PREGNANCY

Q—Is it not true that pregnancy in the civilization today is pathological rather than physiological? *A*—No sir only to a certain extent it is a pathological condition

Q—Is that based on your reading or your own *experience*? *A*—On my own experience and reading and association with men whose practice is the care of women who are pregnant

Q—If Dr DeLee should state that pregnancy should be regarded as a pathological condition *would it affect* your opinion? *A*—Yes—or no I would not say it affected it. I believe *that* pregnancy is a normal physiological condition

Q—I say, suppose Dr DeLee said in our present day civilization that it should be regarded as a pathological *condition*? *A*—Does he say that it usually is?

Q—I say suppose he said—I will read it to you if you want me to *A*—I say does he say that it is usually a pathological condition?

Mr T J Scofield—That is objected to

Mr Hough—He says it is

A—Does he say it is usually so? Then I differ with him

Q—You would differ with him? *A*—Yes

Q—Now, have you had in your general practice, before you went into the hospital, many cases of pregnancy? A—As they occurred in the families, I attended a good many

Q—That is where you had a family practice? A—Yes

Q—How • soon, as a rule, would the woman consult you? A—Usually almost at once

Q—You mean as soon as she discovered that she was pregnant? A—Yes sir

Q—Possibly to ascertain from you whether she was or was not pregnant? A—Miss a menstrual period and usually *want to find out* if she was pregnant, or why she had *missed it*

Q—What do you do when a patient consults you under those circumstances? A—When they did consult me under those circumstances, I usually examined them

Q—I mean, when they did A—I examined them *to find out* what the conditions were

Q—Were there any cases of pregnancy in which you ever gave medicine? A—Yes, occasionally

Q—What were the circumstances, the conditions? A—A woman would have disturbed functions It is a common thing for a woman to be constipated, one would naturally attend to that in a woman in pregnancy You always refer them to a diet I said in pregnancy that one of the dangers from which a woman suffers is kidney disease, and so usually when I was a family physician I usually had the pregnant woman, or women, begin to send their urines to me and have them keep it up during the whole pregnancy, so that I could know what the conditions were and then anything that I found wrong with the urine I would correct But there was not any specific thing that one would say that you could give to any pregnant woman It is an individual equation

Q—What other medicines have you ever given in pregnancy? A—Well, I have given iron If I found a woman anemic, I would give iron I have given them medicine to increase the urine outflow I have given them medicines to palliate headache or backache that might be present, in the form of some palliative thing like salicylate of soda, some simple thing, as I have answered before I cannot name any drug that I would say was specific, because the woman was pregnant

Q—Have you never had a case of morning sickness? A—Oh, yes

Q—What do you give in those cases? A—Well, it is a very difficult condition to handle We usually try to give a general management, try to keep the woman quiet if her place in life would permit her to do so, on a light diet Popcorn is one of the best remedies, and a little charcoal, one of the best remedies for a woman who has sour stomach and nausea *when she is pregnant There is not any* specific medication for it.

The further hearing of the case was adjourned until 2 15 o'clock p m the same day, May 4, 1916

Thursday, May 4, 1916, Afternoon

The court met pursuant to recess Dr Frank Billings resumed the stand as a witness in behalf of the defendants

FURTHER CROSS-EXAMINATION BY MR HOUGH

Q—Do you give anything besides popcorn, doctor, in those conditions? A—Yes, carbo lignum, charcoal and small doses, one drop doses, of carbolic acid in water, cinnamon water, any other simple thing

Q—I didn't hear that last What was it? A—Cinnamon water

Q—I have forgotten when you said you quit using viburnum prunifolium in your practice? A—That I had quit?

Q—Have you quit? A—I said that I had used it last during the last year I have therefore used it in recent time

Q—Have you made up your mind to quit? A—No

Q—The last time you used it was on this woman from Texas? A—Yes sir

Q—Whose patient did you say she was? A—She was my patient.

Q—Didn't she come to you from some other doctor? A—I can't recall whether she came with a letter to the hospital or whether he sent her directly there without any word from him, but I have since corresponded with the doctor at her home concerning her She has her physician there

Q—Well, what I meant was, did she have a physician before she came to you? A—She was at one time in the Mercy Hospital under Dr J B Murphy

Q—How long before she came to you? A—She came to me first in July, 1914, and was under Dr Murphy some time in 1913, from her account of herself

Q—That is, she had been under the care of Dr Murphy here in Chicago? A—At the Mercy Hospital

Q—And then she went back home to Texas? A—Yes sir

Q—And then she came back to you? A—Yes

Q—Now do you know whether she had any medical treatment in Texas between the two times? A—Not from my own knowledge, no sir

Q—Did she tell you? Was it part of the history of her case? A—I don't recall

Q—Do you recall what she told you about herself? A—Excepting as to her general condition

Q—Well, did she tell you what treatment she had had previously? A—She told me what treatment she had had in part She said that about three years before she came to me, which would make it 1911, she had an acute rheumatism with inflammation of the tonsils, and the doctors in Texas had taken her tonsils out about three months after she recovered from the rheumatism

Q—That was in 1911? A—Well, she stated—the general term was three years before Then at Mercy Hospital in Chicago Dr Murphy treated her joints with the injection of some material with the object of trying to cure the joints

Q—And how long was she here at that time? A—I don't know that Several weeks—perhaps two or three months

Q—And then she went back home? A—Then she went—as I remember it she went back home and remained during the winter in Texas, and then came north and came into the Presbyterian Hospital in July, 1914

Q—Now, during all that period, or during any part of it, did she have any menstrual disturbance? A—Her menstrual disturbance occurred beginning in 1913, I think At any rate, she had it when she came to me

Mr Walker Doctor, I think you mistook a date there. You said July, 1914 You meant 1915? A—No, July, 1914, she came to me first

Mr Hough Well, she had it in 1913, that is, when she went to Dr Murphy? A—I think she had it then I am not certain, but she gave a description of her symptoms, that she had *painful menstruation* when she came to me

Q—Had she had any treatment for that at all? A—That I don t know

Q—Now, was she cured when she went back after the first trip here? A—No

Q—Did she take any treatment in Texas? A—She took restorative tonics, iron, and at her periods, which were excessive, she was given ergot in the intervals.

Q—That is in Texas? A—That is in Texas. That is as I learned it from her

Q—Did she state she got any relief from those drugs? A—She did not

Q—Did she state during what period of time they were given to her? A—Usually during the menstrual period when she was overflowing, the iron being given between

Q—Being given a few days before and up to the time when it should occur? A—She was given the iron in the interval between because she had poverty of blood, and she was given the ergot, as I understood it, a little before and during the period

Q—And did she continue that treatment until she came up to you? A—I think so

Q—And when she came to you how long did you treat her for those conditions before operating? A—She was under my management for her general condition, which you *will recall* was for general joint trouble, as well as for the anemia and for the pelvic condition, and the attempt was made to improve her general condition and to save her from operation, if possible, by tonics, by ergot, and at that time I tried the viburnum prunifolium

Q—How long was she kept *on that treatment* before the *operation?* A—Well, as I recall it now, it was during about two periods, that is, beginning with one and running through and then over the other period Not all of the time.

Q—About six weeks? A—Not all of the time A part of the time leaving it off, and trying it again

Q—About six weeks? A—Something like six weeks But let me correct that Not continuous six weeks Trying it for the period until it ceased, and then letting her alone, and then giving it again when the flow began.

Q—And did you give her no other medicine between the periods? A—Iron

Q—Only iron? A—Yes.

Q—What other medicines besides the viburnum prunifolium did you give her? A—I gave her ergot

Q—Anything else? A—Not that I recall No specific remedies applied to the hemorrhage

Q—Was the viburnum prunifolium in the fluidextract or tincture form A—In the fluidextract

Q—And the ergot, was that fluidextract or the tincture? A—That was a neutral preparation, ergotol, a part of it, so that it could be given with a hypodermic syringe, and a part of it was the solid extract of ergot given by mouth.

Q—Now for what period of time would you say you gave her the viburnum prunifolium? A—*Probably for seven or eight*, possibly even ten days I can't recall the exact time. While the excessive flow was going

Q—While the excessive flow was going, only through one period? A—No, I then repeated it, as I recall, through a second period

Q—Were you giving any other medicine at the time you were giving her the viburnum? A—I was giving *her the ergot also,* because the viburnum did not apparently *control*

Q—Well, you say the ergot did not control either? A—Nothing controlled in the way of medicines

Q—How many doses, doctor, of the viburnum did you give? A—Three, as I recall it.

Q—And how much at a dose? A—Twenty minims

Q—Twenty minims? A—That is equivalent to about 20 drops not quite

Q—And you didn't try increasing the dose? A—No

Q—And you say you had given it for the previous period *also?* A—I gave it, *as I recall it, for two* periods when she was *flowing* excessively

Q—Doctor, is there difference in the action of drugs when taken in small quantities during a long period of time as compared with large quantities over a short period? A—*Difference in effect?*

Q—Yes sir A—Yes, there may be some difference in effect.

Q—Isn't viburnum prunifolium one of the drugs that is referred to as the kindlier drugs which have to be given over a considerable period of time to get the effect? *A*—I don t know

Q—Don't all the medical writers who recommend it make that statement? *A*—I don t know

Q—You don t know Now you say that you have heard from her When did she go back to Texas? *A*—Went back in September or October

Q—Of 1915? *A*—1915

Q—And do you know what her condition is now? *A*—She was in Chicago in April two or three weeks ago

Q—And what was her condition then? *A*—Excellent, excepting that she has some bony changes in joints, which are as irreparable a if she had been born with stiff fingers

Q—Is she under the care of a doctor now? *A*—She has her own home phy ician and I don t know whether she goes to him regularly now or not

Q—Would you mind giving us her name and address? *A*—I can give you her name I can t give you her address in Texas now Her name is ———————

Q—I mean privately *A*—Oh privately

Q—Yes *A*—I can give you her name and let you know her address

The Court —All that is necessary is to supply it to Mr Hough at your convenience, if you will do so

VICIOUS OR PERNICIOUS

Mr Hough *Q*—Doctor why did you use the word 'vicious' in connection with the recommending of Wine of Cardui during puberty and pregnancy?

Mr Walker — Pernicious I think he said

Mr Hough *Q*—Did you say vicious or pernicious ? *A*—In what connection?

Q—I understood you to say that recommending the taking of Wine of Cardui during the establishment of the menstrual period or during pregnancy or during the menopause I understood you to say was vicious.

Mr Walker —He said pernicious '

A—I think I used the word vicious

Mr Hough —Vicious? *A*—I think I did

Q—I am a little hard of hearing but that is what I thought *A*—Yes And with the purpose in view of giving my opinion that any remedy that is ordered or advised for wholesale use during the puberty during the period of puberty of young women or during the menopause is absolutely wrong probably detrimental to the health of a lot of people and therefore I would call it vicious

Q—Had any one suggested the use of the word vicious to you? *A*—No sir

Q—You had read the article in The Journal? *A*—No, I don t think I have seen that word

Q—You hadn t seen it Well now was it vicious on—first is the opinion that a thing is vicious a medical opinion or an ethical opinion? *A*—Why I would say an opinion as a humanitarian

Q—But not as a medical opinion? *A*—As a medical opinion—as a qualified medical opinion yes

Q—Now does that opinion presuppose that the drugs in the medicine are absolutely inert and worthless? *A*—No

Q—Is that based on the opinion that the drugs have some potency? *A*—I would be willing to assume that they had some potency

Q—Well do you know whether those drugs in that quantity have potency or not? *A*—In the hypothetical question it was stated that they were present in as I understood it amount to physiologic effects but in a small dose and I would say that the use of any remedies advised generally for the use of women suffering whether in puberty or any other time — it don t make any difference what the drugs — I don t care what they are—is wrong

Q—Well doctor assuming that the hypothetical medicine is Wine of Cardui have you an opinion whether or not it is a potent medicine apart from the alcohol? *A*—Upon the assumption included in the hypothetical question—

Q—Either on that assumption or based on your own knowledge? *A*—And it was stated in that hypothetical question that the drugs named in it were practically Wine of Cardui as I understood it.

Q—Well now assume that they were Wine of Cardui *A*—And I was given to understand that the physiologic effect of those drugs as named there were certain things—a certain sedative effect on the spinal cord from the viburnum a certain sedative effect on the organs in the pelvis that the other ingredient the carduus benedictus had a bitter principle a certain bitter tonic principle Therefore as far as those things go they have a medicinal effect.

Q—What would be the medicinal effect of the hypothetical medicine? *A*—Just what is stated in the hypothetical question

Q—Well what would be the effect, so far as the medicine itself is concerned—and eliminating the alcohol as having any effect—on a woman who had amenorrhea? *A*—I don t think it would have any

Q—On a woman who has menorrhagia? *A*—I don t think it would have any

Q—On a woman that has metrorrhagia? *A*—I don t think it would have any

Q—On a girl or a woman who has dysmenorrhea? *A*—It is a possibility that, given enough of it that it might have enough sedative effect on the spinal cord and with the alcohol in it, to relieve the pain

Q—I am eliminating the alcohol so far as the physiological effect is concerned *A*—As far as the physiological effect is concerned it is assumed in that question that it had an effect on the spinal cord The spinal cord is the path through which pains and other sensations pass to the brain so that a woman may recognize them If it had a sedative enough effect on the spinal cord to interrupt those impulses, or the knowledge of pain, it would relieve the pain

Q—Would it have any effect on a girl in puberty where the establishment of a menstrual period was with some difficulty *A*—I think not

Q—And suppose she had pain in connection with the establishment of the period? *A*—The same answer would apply to a dysmenorrhea or painful menstruation that it is possible that the drug named, having a sedative effect on the spinal cord, might palliate pain

Q—Now is your opinion with reference to the bad effect of giving it at such time based on the effect which you expected the medicine to exert apart from the alcohol, or based on the effect which you understood or thought the alcohol itself would effect or have? *A*—First of all I would consider that the alcohol given in that amount to a young girl right along would be harmful at least with certain individuals as I explained about the use of alcohol If used over a long time in puberty, which may be a long period in a girl s life it may extend from the quick establishment of it to the development over three or four years of time before that girl is rounded out into her full womanhood and during that period she might be irregular and to take that amount of alcohol steadily over a long period of time might establish a habit of alcoholism And certainly in the amount given one cannot say how much irritant effect that would have on the tissues of that girl's body to do her harm As far as the other medicinal ingredients are concerned—that is a part of the question—I don t think they would have any effect in establishing menstruation

Q—Would it have any effect on her at all? *A*—It might have some sedative effect as I have explained

Q—Would it have any deleterious effect on her at all? *A*—That I can't answer I would say this that any drugging it don t make any difference if the remedies were not potent were not harmful—to think of an individual taking the drugs along three or four times a day week after week and month after month, as would be necessary in certain conditions of the development of a girl would be harmful. A bad habit established looking to drugs for help, even when they had no effect at all

Q—Well if they were inert it would be no more harm than taking water? *A*—No, but it would be taking drugs just the same

Q—You mean so far as name is concerned? *A*—It is a bad habit.

Q—Well would there be any other physiological effect except the habit of taking something which was called a drug? *A*—I can only assume the physiologic effect named in the question and if the drugs have that effect they would continue to have that effect physiologically

Q—You mean the sedative effect? *A*—The sedative effect, unless long continued use of it habitual use of it it would finally lose that effect, not react on the individual who was taking it.

Q—Now which do you think is the greatest danger to the girl the effect of the drug that is in the hypothetical medicine or the effect of the alcohol in which it is given? *A*—I think the alcohol would be the more harmful thing but as the two were given together that was beside the question That is they are given together and any harmful effect must be the total bad effect of the whole thing

Q—Well now neither carduus benedictus nor viburnum prunifolium is regarded as a habit forming drug? *A*—No

Q—So that if there is no deleterious effect from the alcohol there would not be any serious, objectionable or deleterious effect in giving the medicine would there? *A*—Yes but there will be an ill effect from the alcohol

Q—From 48 drops in five times that amount of water three times a day? *A*—Given indiscriminately and over—

Q—Well I am asking taking it just three times a day for five days and then stop *A*—Probably not

Q—And then if it was given at the next period three times a day for five days and then stopped would there be any deleterious effect? *A*—I think not Maybe or may not But—

Mr Hough —That is all Thank you

REDIRECT-EXAMINATION BY MR T J SCOFIELD

Q—Doctor just one or two questions. Now in speaking of the effect of viburnum prunifolium and carduus benedictus in this medicine Mr Hough asked you as to its sedative effect. The hypothetical question which I put to you concedes a sedative effect when the medicine is given in from 30 to 60 grains or a full dose Now when you answered as to the sedative effect you had reference to the full doses I assume did you? *A*—I did

Q—Yes sir And not to the amount of the medicine approximately 3 grains contained in the hypothetical question? Is that right, doctor? *A*—That is right.

Q—Now if 30 to 60 grains was required in order to produce a sedative effect would there be any sedative effect—how much of a sedative effect do you think there would be if taken in the extractives from 3 grains? *A*—There may be a sedative effect proportional to the dose of course

Q—Doctor Mr Hough has asked you if a medicine which contains carduus benedictus contained extractives other than cnicin which were active on the womb whether or not it might be effective And you answered that in the affirmative Now doctor assume without knowing what those other extractives might be, assume doctor that a woman s abdomen should be opened and her uterus should be exposed—

Mr Hough —I object to this as improper cross That is direct examination

The Court —Let him finish the question, Mr Hough

Mr Hough —All right I know what he is going to say

The Court —Yes Let him finish

Mr Hough —All right, finish the question

Mr T J Scofield —Shall I go ahead with the witness, your Honor?

The Court —You may ask the question for the record, but it is not redirect-examination It does not cover anything that the cross-examination brought out

Mr T J Scofield —I think it is, if the Court please

The Court —Let him ask the question

Mr T J Scofield —And I will state why

The Court —Finish your question

Mr T J Scofield —I will finish the question

Q (continuing)—And there should be injected into the uterus 45 grains of this preparation containing the extractives that Mr Hough interrogated you concerning, and that as a result of the injection of that quantity of the solution into the uterus there was not, within the space of ten minutes, any action of contraction or relaxation whatever Now what would you say as to whether or not the extractives of cnicus benedictus was a tonic, or produced a tonic effect on the uterus?

Mr Hough —Now that is objected to

The Court —I will let him answer on the theory that it was overlooked on the direct examination

Mr Hough —Very well Very well

Mr T J Scofield —We didn't ask him anything about cnicus benedictus

Mr Hough —If it was overlooked, let him answer

Mr T J Scofield *Q* —Answer the question, doctor *A* —I should say that would indicate that the extractives, or that the virtues of the medicine were not tonic, would not contract the uterus and would not contract the blood vessels

Q —Well suppose that under similar circumstances there was nothing to indicate any sedative effect on the uterus *A* —Inasmuch as I understood in the question that no relaxation occurred, that would indicate that there was no sedative effect

Q —Now, doctor, Mr Hough also asked you about the condition of pregnancy, and as to whether or not it was a pathological condition, or frequently so, and he also asked you whether or not your own opinion would be influenced on that proposition by the opinion of others Now what have you to say about that, explaining fully your views on that subject? *A* —I said before that I considered pregnancy a physiologic, normal condition That there were a few exceptions, anywhere from 4 to 10 per cent, in which women developed some disease as a result of pregnancy, and I named Bright's disease, the wrong implantation of the after birth, and other things. Now there are other conditions that occur that perhaps would make one state that pregnancy was an abnormal condition, or had symptoms connected with it, that is due to the fact that the woman before she became pregnant, and while she is pregnant, is suffering from a constitutional disease A woman can suffer from tuberculosis, from malaria, from hookworm disease, from typhoid fever, from other things while she is pregnant, and even with these more chronic things like malaria and hookworm disease and tuberculosis which have existed for months, perhaps years before she became pregnant. Now she is an ill woman She is bodily ill, she is suffering from malaria She is suffering from hookworm disease She is suffering from tuberculosis. And she doesn't feel well while she is pregnant, and she may have some abnormal things develop in that pregnancy because she, herself, is not well Now that occurs to a large extent in some parts of our country Those who have been qualified to make the surveys show that there is about 21 per cent. of malaria carriers in the south in Tennessee, and in Mississippi, Louisiana and Texas, and through the malarial districts, 20 per cent of the population are malarial carriers In Kentucky and in the South beyond that there are something like 30, 33 to 35 per cent. of hookworm sufferers among women and men You know how prevalent tuberculosis is with us everywhere. And women have those diseases as well as men, and the women become pregnant while they are in that condition Now that is not a pathological pregnancy, that is a pathological individual who has become pregnant, and suffers in consequence And the remedy given for any symptoms that she suffers from during that pregnancy has got to be applied to the condition which makes her ill while she is pregnant She will remain ill as long as she carries hookworm, she will remain ill as long as she has got malaria, she will be more or less ill during her pregnancy if she suffers from tuberculosis, which you cannot remove

Mr T J Scofield —I think that is all, doctor

RECROSS-EXAMINATION BY MR HOUGH

Q —Doctor, while pregnancy, of course, is not a pathological condition, most women who are pregnant have a pathological condition, don't they? *A* —You asked me that question, sir, and asked me if it was not usually a pathological condition

Q —Well, but I didn't mean to indicate that pregnancy itself was a pathological condition *A* —I so understood it

Q —No, I mean whether the woman has not usually a pathological condition while she is pregnant? *A* —No

Q —Never? *A* —Oh, I have already answered that, that in certain places in the country there are 20 to 33 per cent of the women that are probably ill, but in our great Northwest and through here, with the 9,000,000 nearly of farmers all over this country, the women bear and they do not need a doctor half of the time

Q —Of course in that condition it would not be pathological?

A —Naturally it is not pathological

Q —Now, in referring to that district, isn't all you could say about that, that that medicine did not act in that case? That would not prove that that medicine would not act in any case, would it? *A* —Not at all

Mr Hough —That is all

Mr T J Scofield —That is all

The Court *Q* —Dr Billings, you said with reference to reaching the age of puberty that if the menstrual flow established itself at once it was normal Now do you mean by that that in an instant, or over night the girl becomes a normal, grown woman, or does it begin with the small flow, increasing as the period goes on, and gradually becoming normal? And over what time would you regard the maturity of the girl established, generally speaking? *A* —Generally speaking, we speak of puberty as a period when the girl changes to womanhood In some girls that may be rapid, in the change A girl takes on all of the characteristics of a woman in her breasts, and menstruates, menstruates regularly It is normal for that girl

Mr Hough —You mean right from the start?

The Court —What I wanted was—

The Witness —Now the other girl, just as healthy as that one, will take one year, two years, three years for that womanly development. It is an individual characteristic It is a familiar characteristic. She may menstruate in that two or three years a half a dozen times, she may menstruate twenty times, she may menstruate regularly It doesn't make any difference If she is normal she may have that whole period of development. Now she may have at any time pain, as I have explained to you, because of certain general conditions, because of her environment, of her parentage, of what her surroundings are at home, and what she is doing We have girls go out here at early puberty, working as cash girls in stores, they are working their heads off, they get bad air, they do not get the proper rest, they may have pain, but that girl is a normal girl It may be she has got no menstruation, but she is just as normal as the girl that lives on Lake Shore Drive

The Court —What I wanted to get at was whether your experience would give any average time from the beginning of the change to the end, the normal beginning to the normal end? *A* —The normal end of menstruation?

The Court —No the change *A* —One can only say that it may—

Mr Hough —I think the Court means the establishment of menstruation

The Court —Yes.

The Witness —Yes That may be anywhere from two or three months, or a month, as we would say that begin suddenly, or two or three years or four years That is the state of puberty, and the menstrual period is not necessarily an index that that girl's sexual organs are not developing properly That girl, getting married even in that state of puberty, when she may be irregular, is able to conceive although she is not menstruating

Mr Hough *Q* —But the normal condition, doctor, in a state of nature, means that as soon as a girl starts to menstruate she menstruates completely? *A* —Yes, but when you say normal you can hardly use the word as a unit to compare everybody with There are people that say that none of us are normal mentally, not one of us. That we do not find the perfect individual So when you say a normal menstruating girl, a girl at puberty, who are you going to set up for the normal?

NUBILITY

Mr Hough *Q* —Just before you get off the stand, doctor, will you explain to the jury the difference between puberty and nubility? *A* —And what?

Q —The difference between puberty and nubility? *A* —I don't get your his word.

Q —Nubility *A* —Nubility?

Q —Nubility? *A* —Nubility, you've got me

TESTIMONY OF DR. H L APPLETON

Dr H L. Appleton was called as a witness for the defendants

DIRECT EXAMINATION BY MR LOESCH

Dr H L Appleton testified that he resides in Gadsden, Ala, and has been a practicing physician for about twenty-four years He graduated from Vanderbilt University in 1892 He went to Cedar Bluff, Ala, where he practiced eight years, then to Center, Ala, and next to Gadsden He is familiar with the use of Wine of Cardui The first case which he described was that of Mrs A

A —Mistress A, age 26, married, one child The family history negative She called on me in the spring of 1909 for consultation I asked for an examination, after going over her family history, and she refused, but returned, and the examination was made the next day, as I remember it I found a mass in the lower abdomen which seemed to be about the size of a pint, or between a pint and a quart cup She was complaining of headache, pain in her back and legs, and scanty menstruation After getting the history as carefully as I could I advised an operation, which was refused, and she returned to her mountain home, which was about 18 miles from our town In the fall of the same year I got a phone message to go out on Alabama street, and I found it was the same patient Her condition was worse I found her in bed She claimed to have had a chill, but I found no temperature I went over the case carefully, and made the bimanual examination I found the mass had grown larger and her condition was worse I asked her why she had not returned sooner, and she said that she had been advised by her friends, and reading of advertisements to try Wine of Cardui for her relief She did so as directed on the bottle She kept it up until I was called in I asked her if it had done her any good She said she did not think so because she had grown worse as she thought all the while I again advised the operation, which she consented to after consulting her family and removed a dermoid cyst—to my recollection it was from the right ovary the right side, and a part of the left ovary was left I removed the tube and part of the left ovary To-day as far as I know, she is alive and well

Mr Loesch *Q*—How long was it between the time of the operation and the preceding time that you had seen her? *A*—I don t quite understand you

Q—How long a time had elapsed between the time you saw her when the operation was performed and the preceding time? *A*—To my recollection it was just about five months

Q—About five months? *A*—Yes sir

Q—And during that time she stated she had used Wine of Cardui? *A*—She had used Wine of Cardui

Q—Did the history indicate that she had used it previous to that time? *A*—She gave no history of that time just between those times

Q—Was the dermoid cyst that you removed similar to the one that Dr McKenna showed here? *A*—There was no bone in mine I don t remember whether he showed—

Q—There was no bone in yours? *A*—No, mine was just a brown *curly hair—a whisp*

Q—What is your next case, doctor? *A*—Number 2 a girl 13—she gave her age from 13 to 15 She was not positive nor neither was her mother, as to her age She was the daughter of what we call a woodchopper

Q—A woodchopper *A*—Yes sir a woodchopper, and making my rounds I was called in to see her in a convulsion I relieved the convulsion as readily as I could and made an examination and found her with a high temperature quick pulse and very tender over the abdomen I asked her for an examination, bimanual examination which was consented to and I found an imperforated hymen I punctured that and I suppose there was about a pint of pus or a fluid with a very bad odor to it about the consistency—it looked like coffee grounds something to that effect as near as I can state I found after passing my finger in, following up the canal as far as I could that it was a contracted canal of the vagina I dilated that with what is known as a vaginal speculum, or virgin speculum washed it out with a normal salt solution hot water, and left some bromid with instructions for her to be brought to town for further treatment as early as possible She gave a history of never having menstruated having had pains for two or three years from as her mother expressed the blood flowing to her head, and that was what she laid to the cause of the convulsions. And I asked her what she had been doing and she said he had been using among other things Wine of Cardui I asked her for how long She said for some—about eighteen months And I asked her how long it had been since she took the last of it if she had a bottle of it in the house No she said she hadn t had any, she said she had got a bottle of Wine of Cardui that her husband traded a rattlesnake for And I suppose that was about two months before that he was in town

It was brought out that the father of the patient traded a rattlesnake for a bottle of Wine of Cardui.

The next patient was Mrs S

A—Mistress S told me to see her in a case of hemorrhage she was having a severe hemorrhage She was nervous anemic yellow in color cast and upon a bimanual examination I found the vagina almost filled with a cauliflower formation The odor was very bad She was suffering with pains in the head and back her extremities and the lower bowel. I advised an operation, and the family refused She passed from under my care and about four or five months later I was called back to the same patient at the same place, for the treatment for the controlling of another hemorrhage which was more profuse than the one previous I still insisted on the operation and asked her why she had not had something done sooner I told the family that she was beyond my reach as I considered it She said that she had relied on the use of Wine of Cardui to relieve the symptom that she complained of so she had taken it according to the directions on the bottles for two or three bottles I don t remember just which and then increased it, but got no results They consented to consultation and she was carried to Birmingham to the South Highland Infirmary and what is known as the ——— operation was done by Dr Prince at Birmingham As far as I know she is alive to-day We only promised her from one to three years of relief

This patient was operated on later in the same year The next patient was Mrs B

A—Mistress B aged 30 married Called to see her in 1914 Found her in bed pale nervous severe cough, complained of headache scanty menstruation had occasionally high temperature had a hectic flush When asking for an examination she refused She said that she did not send for me to treat her medicinally She only wanted me to treat her for the Wine of Cardui—for laudanum habit which she had gotten into She asked me to keep—she said her husband knew nothing of her condition and did not want him to know and she knew she could *not* live long and wanted to die sober I told her I would *do the best* I could for her I put her on treatment and advised her to leave off the laudanum and the Wine of Cardui which she promised to do and she went on and died

Q—*Now did she state to you how long she had been using the* Wine of Cardui? *A*—About a year and a half

Q—Did she state how long she had been using it before she used the laudanum with it? *A*—No, sir she was trying to reduce the Wine of Cardui, that is how come it she got into the habit of laudanum

Q—She claimed she reduced to one bottle a week with the use of the laudanum? *A*—Yes I asked her how she managed to get it She said it was bought by a neighbor for her

Q—What year was that doctor? *A*—That was in 1912 1913 That *was in an adjoining county*

The witness testified that his driver, a man named W N would drink Wine of Cardui as a beverage when he could not get whisky A woman named S H he also saw drink Wine of Cardui as a beverage He also saw a young man named W W drink Wine of Cardui as a beverage

Mr Loesch *Q*—What year was that? *A*—That was 1906 He came in the drug store and asked for a bottle of Peruna I told him I didn t have it *Then he asked for alcohol and I told him I couldn t* let him have it as he was a chronic alcohol—

Mr Walker—I object to that

The Court—Yes, strike that out What we want to know is, did you see him drink the Cardui

Mr Loesch *Q*—Yes

The Court—Strike out everything after he said he came into the drug store

The Witness—He split a bottle with a friend of his and they drank it there in the drug store and I have another case, Mr P——, a printer

He also saw S P drink Wine of Cardui out of the bottle

CROSS-EXAMINATION BY MR. WALKER

The witness testified that he left Alabama on the 27th day of March, that he has been in Southern Illinois part of the time, and that he went to Southern Illinois at his own expense

Mr Walker *Q*—Do you know how you were found to have any information?

The Court *Q*—How did you happen to come up here, that is what we want to know

The Witness—Well Judge I bought a ticket and came up on the—

The Court—How did you happen to come *A*—I came as a witness for the American Medical Association

The Court—We want to know who asked you, and what were the circumstances

The Witness *A*—Well I got a letter from Dr Heizer

The Court—I want facts

The Witness *A*—I paid no attention to the first letter, and I got the second one asking me to meet him at the Detweiler Hotel in Birmingham Alabama

Q—Yes Do you know how Mr Heizer got your name? *A*—I do not

Q—Or how he happened to write to you? *A*—I do not

Q—Have you got a copy of the letter that he wrote you, the first time, with you? *A*—No sir, unfortunately my grip was went in o and I lost it

Q—Was Heizer with you on that occasion? *A*—No sir there was nobody with me when it was done.

Q—When did you get the second letter from Mr Heizer? *A*—It *was some time in 14 or*—

Q—What? *A*—Some time in 1915 I don't remember the exact date

Q—Can you give us the date when you got the first one? *A*—No sir I didn t pay any attention to the first one

Q—You didn't *pay any attention to that one?* *A*—*I beg your* pardon?

Q—How much time elapsed between that one and the second letter? *A*—I couldn t tell you

Q—Where did you first meet him? *A*—I met him at Birmingham the Detweiler Hotel

Q—Did you go there in response to the letter? *A*—My recollection is he asked me to meet him at my office or in Birmingham and I replied—I think it was by wire though—I replied that I had to be in Birmingham, and I would meet him there

Q—Now then did you give him on that occasion in Birmingham these names that you have testified about here? *A*—No sir

Q—Of these persons? *A*—No sir not all of them

Q—Did you give any of them? *A*—Part of them

Q—Were you then asked by him to look up other cases where people had drank Wine of Cardui? *A*—I was not.

Q—Do you know Dr Goddard? *A*—Dr who?

Q—Dr Goddard *A*—I know of him

Q—You and Dr Goddard had been together while you have been in town? *A*—Considerably so yes sir

Q—And at the same hotel? *A*—Yes sir under the supervision of a detective *most of the* time I think.

Q—Yes?

Mr Loesch—And pursued by detectives most of the time? *A*—Under the supervision

Mr Walker —I don't wonder that they had you watched

The Witness —I am not sure—

Mr Loesch —It is about time that the jury finds out they are all watched

Mr Walker —I don't know why you should hire men to watch your witnesses, but I am sure that you may if you want to

Mr Loesch —I don't know who is doing it, but I know we are all watched And I know that I am not having myself watched

The Witness —It was not at my solicitation that I was watched

Mr Loesch —It is not at my solicitation that I am being watched, either

Mr Walker —It might be better if you would do that

Mr Loesch —It might be, that might very well be

Mr Walker —Now I apologize for their putting detectives on to you

The Witness —Oh, there is no apology necessary at all

The witness was then cross-examined concerning S P He stated that S P drank part of the contents of the bottle and put the bottle in his pocket the first time the witness saw him drink it He testified that he sold to S P a part of the Wine of Cardui which the latter drank He was cross-examined concerning each occasion when S P drank Wine of Cardui The witness testified that he himself has not drunk Wine of Cardui, but he is not a prohibitionist

The witness testified that S H, W W, S P and W N are all dead

Q —W N —the driver that drove for you? The man that used to stop the rig and get out and take a drink when he was driving you who would stop and get out and take a drink of Wine of Cardui, and then get in and drive you to the next place *A* —He never had a family, so far as I know

Q —Didn't he use to take a bottle of Cardui, when he was driving, and take a drink, and then go a little further along with you, and then take another drink of Cardui out of his bottle? *A* —Yes, sir

Q —Did he drive you every day? *A* —No, not every day

Q —Over how many years did W work for you? *A* —Two years

Q —Two years? *A* —Yes, sir

Q —Was it a buggy or a horse or an automobile that he drove? *A* —Well, sometimes one horse and sometimes two horses

Q —Would he drink more Cardui when he was driving two horses than he did when he drove one? *A* —Well, I did not take any notice of that

Q —Well, did you sell W N this Cardui? *A* —I beg your pardon?

Q —Did you sell him the Cardui? *A* —No, sir

Q —Did he use to get it from your drug store? *A* —Sometimes Sometimes in the country store

Q —Stop on the way, when you were driving somewhere? *A* —Yes, sir

Q —And get out and get a bottle? *A* —Yes, sir

Q —And come back and get in and drive you along again? *A* —That is correct

Q —Didn't you make any objection to his buying the Cardui from the country drug store, instead of buying it at yours? *A* —I did not

Q —Where was your store when W N was alive? *A* —It was at Cedar Bluff, Alabama

Q —The same place, Cedar Bluff? *A* —Yes

Q —Did he die while he was still in your employ? *A* —No, sir

Q —How long after he quit you did he die? *A* —I could not tell you

Q —When did you last hear of him? *A* —Oh, 19—, somewhere in 1900

Q —Where was he then? *A* —He was at Cedar Bluff

Q —The same place? *A* —Yes, sir

Q —Was he married or single? *A* —He was single

Q —Now, your first experience, as I remember it, ever seeing any body drink it, was in 1894

Mr Hough —'93

Mr Walker —'93 the first? Is that right? *A* —That is right, 1893

Q —W N was the first one? *A* —Yes

Q —Now, that is 23 years ago Well, will you name any human being in any place that you have ever lived in the last 23 years that you ever saw take Cardui as a beverage, that is, alive, or who has a relative alive, that you can tell us of, and give us his name and address? *A* —I don't know that I can

Q —These four dead ones are all that you ever saw drink it, are they not? These four dead ones are all you ever saw take it? *A* —All I call to [illegible] just *now*

Q —Is your compensation here in Chicago based at all on the number of dead ones you can testify about?

Mr Loesch —I object to that

Mr Walker —I am just asking him if it is a fact

Mr T J Scofield —That is not a proper question

The Court —That is not the way to get at it, Mr Walker

Mr Walker —All right

Mr Loesch —If you want to make fun of it, that is a little different

Mr Walker —He is not at all amusing to me

Mr Loesch —It must be very amusing

The witness then stated that he would give to the attorneys for the plaintiff the names of the women to whom he referred, also the names of their husbands and addresses, so far as he is able He was then cross-examined concerning the case of Mrs A and the case of the woodchopper's daughter He answered in detail questions concerning the various examinations and the pathologic conditions found in these cases He also gave the names of the physicians who performed the operations on these cases

The witness was then questioned in detail concerning the case of Mrs B He gave her strychnin as a tonic and advised a diet This patient had tuberculosis but did not wish to be cured of the tuberculosis, she wanted to be cured of the laudanum and Wine of Cardui habit The witness last saw her husband in 1913

TESTIMONY OF DR. JAMES W FENNELL

Dr James W Fennell was called as a witness on behalf of the defendants

DIRECT EXAMINATION BY MR LOESCH

Dr James W Fennell testified that he is a physician residing in Landersville, Ala He graduated from Birmingham Medical College in 1901, and has been practicing in Landersville since that time He was called to see a Mrs E W at night and found that she had taken about two thirds of a bottle of Wine of Cardui The patient feared a miscarriage She had been taking the Wine of Cardui for three or four weeks off and on and that day had secured a fresh bottle, of which she had taken about two thirds He stated that she was disgustingly drunk. She was a woman about 25 or 26 years of age He treated her in 1906

Another case was that of Mrs B He examined her and found that she was pale and anemic She gave a history of amenorrhea, for which she had been taking Wine of Cardui She had had a miscarriage the year before and had been attended by an old negro woman The abdomen was distended similar to the condition in pregnancy On examination he found the cervix completely closed He called consultation, the cervix was opened up and perhaps a gallon of an offensive semifluid mass passed off The patient promptly recovered This case was seen in 1907 The patient had been using Wine of Cardui five or six months

Dr Fennell was called in consultation to see Mrs S, who had been suffering with pelvic pains for nearly a year, and had been taking Wine of Cardui without improvement Her family physician told her she had cancer On examination Dr Fennell found she had cancer, which was too far advanced for operation The patient was a woman between 45 and 50 years of age She had children and grandchildren The patient died This case was seen in 1910

Mrs J H consulted Dr Fennell in 1902 She was about three months pregnant and had had four miscarriages previous to that time The previous pregnancies had not gone longer than the fifth month The patient had been taking Wine of Cardui each time Dr Fennell forbade the Wine of Cardui, put the patient under treatment, and she went the full term, and has had four or five children since that time The patient stated that she had used the Wine of Cardui to prevent miscarriages

The witness was called to see Mrs P B, who suffered with profuse menstruation and hemorrhages She was weak and had been taking Wine of Cardui for five or six months without relief On examination he found that she had pellagra from which she died in an insane asylum She was about 27 years of age, and had been using Wine of Cardui for five or six months

Miss M F was an orphan girl 27 years of age, suffering with amenorrhea, who had been taking Wine of Cardui off and on for years She took it when she could get money to buy it She was pale and anemic On examination he discovered she had hookworm for which she was treated and recovered

Mrs A L B he saw in 1912 She had profuse menstruation with hemorrhages On one occasion when she fainted Dr Fennell was called She had been taking Wine of Cardui to correct this condition for seven or eight months Dr Fennell stopped the Wine of Cardui and the patient recovered under treatment

The next case was Mrs C F She was having convulsions when Dr Fennell was called Labor had started and the convulsions were those of puerperal eclampsia The feet and legs of the patient were swollen He found that she had been taking Wine of Cardui On examination of the urine it was found to contain albumin Dr Fennell and another physician treated the patient for several days She became well The mother and baby both lived She had been taking Wine of Cardui about six months

Mrs H S, 38 years old, also had puerperal eclampsia convulsions, albuminorrhea and swelling of the feet and limbs Dr Fennell saw her in 1903 at the termination of the pregnancy The patient was saved, but the child died It had been dead for two or three days according to the opinion of the physicians

Mrs B C, a colored woman, Dr Fennell saw in 1910 She had been suffering with convulsions due to eclampsia She had been taking Wine of Cardui for four or five months Both mother and baby recovered under treatment

Dr Fennell was then asked to describe any cases in his knowledge in which Wine of Cardui had been used as a beverage. In 1904 a man brought his wife to consult Dr Fennell They gave the history that she had been suffering with a run down feeling She decided she had female trouble and had taken Wine of Cardui At first it seemed to help or relieve her Later she doubled the dose and finally began to take a third of a bottle at a dose twice a day

Mr Loesch *Q*—Did she come to you for treatment for alcoholism? *A*—She did not know what it was Yes she came to me for treatment for whatever was in that Wine of Cardui

Q—That is it Now tell what you did there *A*—And she stated after she got her dose that morning she and her husband were going to church and she was not able to go but he told her they would stop up here and see if they could get a tonic She got there and opened the bottle and took two or three doses before it had the desired effect And then it had such an exhilarating effect it made her so talkative that it aroused her husband s curiosity, and they got talking over it and they decided—

Mr Walker—She was telling you this the woman or her husband

The Witness—Her and her husband—and decided she had formed a habit and brought her to me to treat her for it

Mr Loesch *Q*—What did you do? *A*—I stopped the Wine of Cardui and gave her some sedatives and bromids

Dr Fennell stated that at one time he saw several men drink Wine of Cardui in back of a store.

CROSS-EXAMINATION BY MR. WALKER

On cross-examination the witness gave the names of several of the persons whom he saw drinking Wine of Cardui behind the store as well as other persons

The witness stated that his father and mother also saw the men drinking the Wine of Cardui He keeps some drugs, but does not conduct a drug store He has been a member of the American Medical Association for five or six years He first heard that a suit had been brought against the American Medical Association when it came out in THE JOURNAL of the AMERICAN MEDICAL ASSOCIATION He received a letter from the Secretary of the Alabama State Medical Society There was no letter from Dr Heizer enclosed Later the witness received a letter from Dr Heizer, whom he met in Birmingham He gave to Dr Heizer the names and addresses of patients concerning whom he testified

The witness came to Chicago during the last part of March, remained here a few weeks, returned home, and came back to Chicago again His expenses are to be refunded

The witness was then cross-examined in detail concerning the case of Mrs E. D and Mrs M B, which he described as on direct examination In treating Mrs M B he gave her syrup of iodid of iron and some quinin in capsules in powder form

The witness was cross-examined concerning the date on which he treated Mrs S He was asked in detail about the cancer growth in this case He was then asked concerning the date on which he treated Mrs J H and Mrs P B He answered as on the direct examination

Q—Now M S—she had hookworm? *A*—Yes, sir

Q—How long did you say she had been taking Wine of Cardui? *A*—She had been taking it off and on for four or five years

Q—For what? *A*—Four or five years taking Wine of Cardui off and on irregularly

Q—Well does the hookworm disease last that long *A*—It lasts a lifetime if you don t remove it, remove the cause

Q—Yes it lasts a lifetime but how long do you die after you get it? *A*—Some people die with old age, I guess, that have the hookworm

Q—You treated the hookworm, and did you say she got well? *A*—Yes sir

He was then asked in detail concerning Miss M S and Mrs C F

Q—Do you know what causes eclampsia? *A*—It is disputed, Judge There are several theories It is supposed to be toxins faulty elimination the kidneys and liver failing to do their duty failing to throw the poisons out and they remain in the system and cause it

Q—The toxic condition coming from the fetus in the womb—isn t that it—from the child? *A*—No but where it fails to throw the toxins out—uric acid and others—I think uric acid, they claim plays an important part in it

Q—Now, did you ever see any one besides these two women with eclampsia? *A*—Yes sir there are a lot of cases of it

Q—A lot of cases? *A*—Yes sir a good many cases

Q—Those are the two, however, that had taken Wine of Cardui— *A*—Yes sir

Q—What had the other one taken? *A*—There are three of those eclampsia cases that had taken Wine of Cardui

Q—What had they—you have seen a great many of them where they had spasms in pregnancy— *A*—They may have taken Wine of Cardui too and I don t know

Q—You don t know that they had taken it? *A*—No I don't know that they had—

Q—If you had a history of Wine of Cardui in any of those other eclampsia cases you would have given them here, wouldn't you? *A*—A lot of times I don t take down memorandums—nobody could remember all the Wine of Cardui cases we have in our country

Q—If you had a case of eclampsia where the person had been taking Wine of Cardui— *A*—If I remembered positively that they had—

Q—If they had told you about it, you would have testified about it here? *A*—Yes

The witness stated that he had had seven or eight cases of eclampsia of his own and had been called in consultation with other doctors when they have had cases The witness could not begin to guess how many patients he attended who had menorrhagia or how many with amenorrhea He has not had many pellagra cases He treated Mrs H S, who suffered with eclampsia with veratrum and morphin Instruments were used and the uterus was emptied In most of the cases of eclampsia the child died He has not had a case in which the mother died He was once called in consultation to a case but before he arrived both the mother and child died He cannot remember how many patients suffering with pelvic difficulties he has seen altogether It would be safe to say at least fifty a year and this will be true over the last fifteen years

Adjournment was taken until May 5, 1916, at 10 30 a m.

May 5, 1916, Morning

TESTIMONY OF DR WILLIAM O KROHN

The court met pursuant to adjournment Dr William O Krohn, Chicago, was called as a witness for the defendants

DIRECT EXAMINATION BY MR. T J SCOFIELD

Dr William O Krohn testified that he is a physician practicing in Chicago He received his doctor's degree in Yale 1889 He then taught for two years at the Western Reserve University Cleveland, Ohio He spent a year abroad in various German universities Returning to this country, he was made senior teaching Fellow at Clark University Worcester, Mass In 1892 he became head of the department in the State University of Illinois which position he held for five years From 1897 to 1900 he examined patients for admission to the State Asylum at Kankakee He did two years medical work at Northwestern University Medical School receiving his degree in 1905 For six years he was medical juror in the Insanity Court of Cook County He has been clinical instructor in dispensary work at the Northwestern University His time is largely given to nervous and mental diseases but he also does some general work.

Q—Doctor, what has been your experience, if any, with reference to the relation between abnormal conditions in the female pelvic organs and nervous affections in woman? A—My experience has been quite extensive in that connection We find a great many nervous conditions that are traceable directly to abnormal conditions in the pelvic organs of woman, depending in kind and degree somewhat upon the cause, somewhat upon the time that it is existent, somewhat upon whether it is an organic change in structure progressively receding, or growing worse. But we have all sorts of nervous diseases, nervous conditions, resulting from upsets and abnormalities or disturbances in the pelvic organs of woman

Q—How are these troubles or conditions treated, doctor, in a general way? A—In a general way you take each nervous disease as it is when it presents itself, as perhaps it may be more aggravated in its symptoms, and the symptoms will have to be alleviated for the time being But your fundamental, or your ultimate object is definitely to find the cause of a particular disease, and remove that cause That is, the particular disease, and remove that cause That is, the cause of the particular disease or of the particular nervous manifestations When you find the cause, no matter what pelvic condition it may be, you seek to eradicate that in so far as possible

Q—As a condition to the further treatment of the nervous condition? A—As an essential prerequisite to the cure of the nervous condition

Dr Krohn testified that he has had no experience with cnicus benedictus He used viburnum prunifolium for a year or two but found that it did not succeed so he discontinued its use nine or ten years ago

There was then read to Dr Krohn a hypothetic question similar to that asked of other witnesses He stated that he had an opinion as to the physiologic and therapeutic value *of the hypothetic medicine*

Q—What is that opinion? A—In my opinion you have described in your hypothetical question an alcoholic bitter, that is, an alcoholic solution, 20 per cent alcoholic solution, that contains a dash of bitters

PUBERTY

Q—Doctor, I wish you would explain what is meant by the term "puberty" in conjunction with the special experience which you have had, if you have had any? A—By 'puberty" we mean the developmental change that takes place in the unfolding of the boy and the girl from childhood to manhood and womanhood More particularly in this connection, I was a director of the work of examining, making physical tests and measurements also mental examinations and tests as to memory, power of attention and various mental faculties in 40 000 schoolchildren, showing the particular changes that take place at puberty, or pubescence

More particularly in the girl, we found that this developmental charge is characterized by certain periods or lunges of growth, physically first that this period of growth is an unfolding in a certain definite order, that all children grow in exactly the same order but grow at a different rate, so that we have a different length of time for the period of the female unfolding

We have at this period certain manifestations of this development In the first place there are certain changes in contour, in form and in size The child will shoot up like a weed for a little while, and then he will grow in breadth of chest and depth of chest and then in the contour of the body

The girl evidences it in the fulness of the breast, and in both boys and girls, there are certain other manifestations We find certain manifestations that are peculiar to the girl To illustrate, the establishment of menstruation, which comes on some months, even as long as a year and a half, after the period of puberty has begun to be initiated This may be established in the course of one month or two months—that is, the menstruation, I mean, may be established in the course of one month or two months or six months or a year or more, but the period of pubescence is a period of development including these physical and mental changes that take place before the establishment of menstruation and certain other changes that take place after the establishment of menstruation

We have, on the nervous system side, certain peculiarities that are due to this period in its unfoldment We have the instability we have the irritability, we have what the Germans call "the period of storm and stress," where these emotional outbursts, these emotional and erratic tendencies show and when certain characteristics assert themselves which are developing in them as they become sexed and which cause them to clash with school discipline, with authority at home and in school and they come in clash with the discipline and they drop school because of this irritability and these conditions that are the result of the reaction of their nervous system peculiar to the period of puberty

Q—Now then, Doctor, you have described, as I understand it, the period of time that may be required for the establishment or development of the menstrual flow But I do not understand that you have stated the length of time that may be required for the establishment or development of puberty itself A—Puberty in Illinois—that is the result of the measurements on 40,000 schoolchildren, the average time is three years. That varies a little in different latitudes I am speaking of the girl now With the boy it takes a little longer to be established and there are some other things, the change of voice and so on, that are included in the puberty period in a boy But speaking of girls, the average length of time is two and a half to three years in the United States

Q—Now, Doctor, have you an opinion as to whether every girl should take such a medicine as I have described to you in the hypothetical question, at the time of puberty? A—I have an opinion yes, sir

Q—Well, what is that opinion, Doctor? A—In my opinion, when we recall that this is the normal, natural, physiological evolution of the growth of the child from girlhood into womanhood, when we recall the peculiar state of unrest that the nerve cells are in, when we recall the particular groups of muscles that are undergoing growth changes at different periods, when you recall the changes in circulation, and in the various functions of the body, leading up to the establishment of menstruation and the settling into the individual's trend and bent afterward, to my mind the prescription or advice of giving such medical contents as you have described in the hypothetical question is absolutely and positively wrongful advice

It has no basis whatever—no justification and no basis at all for its being given, because of the vast possibility of harm that it will work out, harm, physical harm, I mean, merely physical harm and harm to the nervous system, I mean mentally and emotionally You have a high degree nervous condition and you give a medicine that is so largely alcoholic in content, you add fuel to the flame in these explosive nerve cells and you start certain nerve diseases that would otherwise be unknown in the life of that individual You instigate certain abnormalities, certain morbidities and certain deviations from the normal type that would otherwise—a type that would otherwise remain normal except for the giving of such a drug

Q—Now Doctor, are there any special troubles that sometimes occur in young girls at this period, at the period of puberty? A—There are distinct diseases that are characteristic, at least are common to this period, more common to this period than others, and some that are characteristic of this period

There are certain nervous diseases that attach themselves to this period in the life of every developing girl There are certain blood states that are peculiar to this period I might mention chlorosis, I might mention the disease involving nerve tremors, the diseases that are the result of malnutrition in the changes that take place at this period

The growing girl at this period requires her food not only for relieving the waste of destroyed tissue each day, but has to have material to supply the growth as well It is a period of most rapid growth in the life of a girl, and because of the instability there are certain nervous diseases that are peculiar to this time.

Q—Now, Doctor, what is the effect of alcohol as contained in the hypothetical medicinal solution, in these conditions, on the conditions which you have described? A—Alcohol given at this period of instability, at this period of unrest, at this period of storm and stress, cannot help but cause a greater instability and also interfere with the normal functioning of the body that would ensue were there not this alcoholic interference, so that you have certain diseases of an explosive type, certain forms of hysterical manifestations, certain forms of nervous weakness and tremors that are directly ascribable to an alcoholic medicine at this time

Q—Now, Doctor, have you an opinion as to whether a medicine, such as I have described, which contains 48 drops of pure alcohol to each dose should be taken by every girl, including the normal girl, at the time of puberty, and that such medicine can never do her anything but good? A—I have an opinion

Mr Hough—I object to that, if the Court please

The Witness—I beg your pardon

The Court—He may answer

To which ruling of the Court the plaintiffs, etc, excepted

Mr T J Scofield Q—What is that opinion? A—In my opinion, as I have already indicated, the statement that it cannot do any harm is absolutely unfounded in fact, is untruthful in other words and has no basis in medical fact, has no basis in—when we come to understand the physiological organization of the girl, and that to prescribe that or advise that as a general method of procedure is vicious It is more than vicious, it is absolutely wrong from a medical and psychological standpoint

MENOPAUSE

Q—Now then, Doctor, you have described the period at the beginning of the menstrual development in a woman Will you kindly tell us something about the end of the menstrual life in a female A—The period at the end of the reproductive cycle in woman known as the menopause or change of life, or climacteric, is a period that again is fraught with a host of regressive changes as distinguished from the changes at puberty

At puberty there is this hurrying up in growth, the impulse to grow and become larger and bigger It is the growing impulse In the woman, we have the loss of certain activities the loss of certain functions We have coupled with that the reflex effects of that loss or the reflex effects of the inactivities.

So that during this period that obtains from three to five years, that is, he climacteric, the change of life or menopause you have any possible nervous diseases from headache to forms of unconsciousness from mere minor pains to convulsive seizures, from merely temporary weakness to complete prostration, the exhaustion diseases, the diseases that are the result of the fatigue poisons, the diseases that are the results of malnutrition and the malnutrition is accentuated because of these modifications that are going on within the organism

You have all forms of vascular changes, blood circulation changes. We have the hot and cold flashes and we have the spinal symptom You have the lead cap headache at the top of the head pressing and pressing The disturbances that are associated with lack of the power of initiation, the inertness that some women have at this period, the lack of ability to initiate something new They simply drag along as a result of the nervous modifications of these repressive changes in the organism

We have of course these changes in the circulation in the pelvic organs causing changes of circulation in the adjacent viscera and as a result of that you have a looseness of the intestines the lax ligaments of the intestines and the liver dropping down and the abdominal organs and then you have that dropping down of the stomach and intestines and then you have the poisons locked up in the body, the fermentations from the decay of food and a host of diseases that are attributable to this period and are because of these changes

Q—From your experience what would you say is the average length or duration of the menopause? *A*—The average did you say?

Q—Yes *A*—From three to five years

Q—Have you an opinion Doctor, as to whether a medicine such as I have described should be taken regularly on the first sign of the change of life and its use continued throughout the whole period Have you an opinion? *A*—I have an opinion yes

Q—What is that opinion? *A*—In my opinion that is again very wrongful advice It is wrong as against the woman s own condition that is her physical condition It is wrong in its disguising of the true condition An alcoholic medicine or preparation, such as you have indicated in your hypothetical question, may make the person temporarily seem to be well when actually they are not well and are becoming less and less well and more and more sick

And then again the peculiar nervous depression and the peculiar physical depression that is characteristic of a large number of those cases make the ingestion or the taking in of any alcoholic medicine or alcoholic preparation a serious proposition for while the momentary effect of the alcoholic preparation would be exhilarating the reaction is more pronounced in a woman of this type in a woman at this period, and so while she may in the course of time, for a moment or a few moments or a few minutes, as the result of this alcoholic preparation feel better, she will partake of it regularly—but she will sink down in the trough of the sea further between the doses and she will seek to obviate this increased depression that is caused by this form of medication she will seek to obviate it by more frequent doses or by larger doses

Q—Doctor I want to read a quotation from the Ladies Birthday Almanac for the year 1907 copyrighted by the Chattanooga Medicine Company I read from page 9 under the heading Untold Misery '

> Woman Why let yourself be dragged down made miserable sere, yellow withered wrinkled and gray haired before your time by the pain you think you have to endure Untold misery is suffered every month by thousands of women for want of the right medicine to help their troubles Wine of Cardui Take it and it will help you as it has helped many others in the past 30 years No matter what the pain headache backache waist pain bearing down cramps colic and so forth caused by weakness or irregularity of your womanly functions, Wine of Cardui has been proved a successful treatment for their relief or cure"

Now then Doctor assuming that the hypothetical medicinal solution which I have described to you corresponds to Wine of Cardui have you an opinion as to whether the statement which I read to you is true? *A*—I have an opinion yes.

Q—What is that opinion? *A*—My opinion is that it is not true

Q—Why not? *A*—For the reason that you have listed there a host of groups of complaints of various headaches and symptomatic complaints that you have mentioned there that are due to countless varieties of causes.

If you would put in all of the drugs in the pharmacopeia you could not in any one solution cure all of those things. It would be impossible to reach and attack all those.

In the second place it is untrue in alleging benefit because it suggests to women at a period of life when they are most suggestible that there is something that will relieve anything that they may have It first suggests that they have these things, and the suggestion becomes more potent, more forcible as they read it over and over In fact the psychology of advertising is to list as many as possible and then as they read of these complaints, they find that they have not only one but they have two or three of these various things, and they are induced to take something at this period when these changes are most pronounced at the climacteric or menopause that will do them harm

Mr Hough—I suggest that that be stricken out, as not responsive to the question He was not asked to testify as an expert on advertising

The Court—No, but he was asked why it was his opinion that the statement was not true

Mr T J Scofield—That is the question

Mr Hough—The issue in the case is what the medicine will do

The Court—Yes, and this statement—

Mr Hough—Not what advertising might suggest.

The Court—This statement was taken from one of the advertisements of the plaintiff in this case

Mr Hough—The point I make is, that it is not an issue in the case

The Court—It stated certain things that this medicine would do as I recall the extract that was read

Mr Hough—And instead of saying that the medicine won t do it, he undertakes to say that that suggestion of a lot of things is one of the purposes of advertising, and that is not responsive

The Court—That was the opinion of the witness as to why he gave his answer It may stand, and you may save your point

To which ruling of the Court the plaintiffs etc, excepted

Mr T J Scofield *Q*—Now Doctor, I wish to read to you from the Ladies Birthday Almanac, for the year 1911 copyrighted by the Chattanooga Medicine Company I read from page 9

> Whatever you do, don t be nervous'

The quotation from the Almanac, is under the head of "Nervous Women"

> Whatever you are, don't be nervous. Nervous people don't live long they grow thin and tired and irritable lose sleep, catch cold and other troubles as soon as these ailments attack them and nearly always suffer from womanly weaknesses To relieve nervousness take Cardui the Woman s Tonic By helping build up the nerves Cardui helps the rest of the body and health is the result Are you nervous weak irritable sick? Take Cardui regularly and you are well It is harmless It does not cause a habit Take Cardui regularly until you are well It is harmless, it does not cause a habit. It acts gently and naturally, not like a powerful drug, but just like a mild herb remedy, which it is"

Doctor assuming that the hypothetical medicinal solution corresponds to Wine of Cardui what is your opinion of the advice given in this quotation to take Cardui to relieve such nervousness? *A*—In my opinion the advice is wrongful and without justification, for several distinct reasons

In the first place, the statements upon which it is predicated are, to a certain extent in error that nervous people don t live long and certain other things that are absolutely in error that nervous people are thin Some of the worst cases of nervous diseases are in fat men and fat women The premise is wrong to begin with

In the second place you have described here what to my mind is a distinct general—distinct type of nervous complaints which we group under the term or disease neurasthenia ' by which I mean a disease that is characterized by increased exhaustibility, and also by increased irritability Those are its nervous manifestations

You will find underlying those nervous manifestations certain pathological changes that are distinct and characteristic of neurasthenia You will find for example a process of fermentation going on in the bowel tract. You will find the distended baggy, boggy stomach with its fermentation, and with the retained toxins. You examine the urine of such a person, and you find the indican, the product of the fermentations that are going on

You find that the liver has dropped down, and the ligaments have become lax You will find that there is a general ptosis bearing down of all these organs

Now the hypothetical medicine that you have described, and which you have characterized as being of the type as was prescribed under these directions that you have read or the quotation cannot get at these underlying causes and cannot relieve the increased excitability, and cannot relieve the increased irritability that is characteristic of the disease

Q—Now Doctor what is your opinion of the following statement in the same quotation assuming that the nervousness is due to some female trouble Take Cardui regularly until you are well On the same assumption what is your opinion of the following statement It is harmless it does not cause a habit.' If you have an opinion state it *A*—Yes, I have an opinion My opinion is this That it will do harm and that it will tend in this nervous type that you have described or assumed that it will tend to the forming of habits.

The taking of any exhilarating remedy any remedy with alcohol content or any other exhilarating agent that makes a person seem more comfortable for a brief period, and then the reaction—they slip down and a nervous person will slip down further below the level that they were before they took the medicine—the pendulum swings back further and, as a result of that they feel a sort of need to get more exhilaration and they take more medicine and they keep on taking it because as they take it they are sure to get more reaction in between To obviate that reaction, they will take it more and more frequently and you have a habit formed as a result and the harmful effect

In other words the harmful effect of such a plan of procedure is such that the person makes their nervous system their enemy rather than their ally They have a nervous system that drags them down and hinders them and injures them in all of their activities rather than one that helps them and benefits them

Q—Now Doctor calling your attention to the Ladies Birthday Almanac for 1913 copyrighted by the Chattanooga Medicine Company and on page 27 of that book I read from an article under the heading Oh that headache

> Of course headache is only a symptom but it is a mighty miserable thing to have and when it becomes a regular visitor it begins to be a calamity Wine of Cardui will not act like a nerve deadener to kill the pain of the headache right off but it goes down to where the real trouble is and begins at once to remove the cause the female inflammation irregularity or other form of womanly disease In this way after a few doses, the headache most likely disappears and, when the real trouble is cured it stops those regular visits. Try the Cardui treatment for headache and other womanly pains

Now Doctor, assuming that the hypothetical medicine, which I described to you in my hypothetical question corresponds to Wine of Cardui approximately will you let us have your opinion as to whether such a medicine will cure the real trouble, as stated in this quotation *A*—I have an opinion

Q—Will you tell us what that opinion is? *A*—In my opinion the statement is not borne out by the facts at all, for the reason that, in the first place, you have as many as fifteen different causes of headaches Many of these causes, of course, you can find out from the location of the headache

That is, we know, if a headache is at the top of the head, that it is due to anemia or excitement or worry We have also a large number of headaches that are toxic, the cause of the headache is toxic, by which I mean either poisons that are developed within the body from fermentations, autointoxications, or poisons that are ingested with the food, from improperly prepared or improperly cooked food or food that is improperly contained in cans.

You get your generally described frontal headache You have certain headaches that are due entirely and wholly to eye disease, that is diseases of the eyeball You have other headaches that are due entirely to a shortening or lengthening, at least the incoordination of the external muscles of the eye You have certain headaches that are due to decayed teeth You have certain headaches that are due to ear disease You have certain headaches that are inherited with a nervous condition, the migraine headaches and other headaches of that type

Now the medicine that is advised, the hypothetical medicine and the medicine that is advised in this statement that you have quoted to me about going down to the origin or the seat of the trouble, does not reach and could not possibly reach the larger, perhaps the larger number of groups of headaches which I have listed

Then there are a host of reflex headaches, due to reflex irritation of the pelvic organs, that would be really accentuated by such a remedy There are certain headaches, where if you give any medicine that contains the least alcoholic content whatever, they will become more booming, more thumping, more painful, and more excruciating

Q—Now, Doctor, I read to you from the Ladies' Birthday Almanac of 1910, copyrighted by the Chattanooga Medicine Company, page 19, under the heading "Can't sleep"

> "When nature is too exhausted for sweet sleep to come and rest the weary mind and frame, take Cardui the Woman's Tonic Sleeplessness is usually a sign of tired nerves It is one of the symptoms of a nervous breakdown, and should have immediate attention By building up the nerves and womanly system, Cardui soon brings balmy sleep and restores the weary body to fullfledged energy and refreshment This method of treatment is safer and better in every way than the use of drugs opiates, bromids, and nerve sedatives It creates no habit but gently helps every part of the body to do the work as Nature planned it to do You cannot fail to get Cardui if you ask for it in any drug store"

Now then Doctor, on the same assumption, that the hypothetical medicinal solution corresponds to Wine of Cardui, I would like to get your opinion in reference to the statement in this quotation that it builds up the nerves and womanly system, and restores the weary body to fullfledged energy and refreshment *A*—I have an opinion, and in my opinion you have there stated in the first place a more profound form of this nervous disease, neurasthenia, of which I have already spoken

Now there is nothing in the hypothetical medicine that you have assumed, or the hypothetical solution that you have assumed, there is nothing there that will build up or increase the nervous strength of the individual It rather operates the other way

You have a case of profound fatigue in this nervous condition that you have described It is like whipping a tired horse to make it go a little further, because—to give a medicine that has the alcoholic content that you have assumed, you make it more tired

Instead of building up, there is nothing in it that will reconstruct You have not assumed any element in that that reconstructs the tissues, but you have simply given or used a sort of a whip to whip an overfagged, overtired nervous system

Now fatigue always engenders a poison in the organism You can not be fatigued without having poisons develop in the body The more profound that fatigue, the greater or more intoxicating is the poison The blood of a fatigued animal will poison another animal if injected into it

Now, this fatigue that you increase by your treatment by your whipping up will simply cause more destruction of tissue, more destruction of vitality, more weakness and all of those qualities that you have described in the condition of the woman in that quotation

EXPERIENCE WITH WINE OF CARDUI

Q—Now finally, Doctor, have you had any experience with Wine of Cardui? *A*—I have in two instances only

Q—Will you please relate your experience? *A*—The first is a case of acute alcoholism, and it came under my direction as an emergency matter while I was visiting or attending to some of my—well, it was a farm or plantation down South, at Summerdale, Alabama There was no physician located there The woman had become very much disturbed and was showing certain marked signs that alarmed a neighbor woman, and also alarmed her own family I was called in simply as an emergency matter, not as practicing in Alabama, but to afford what relief I could

I found a case of acute alcoholism She was drinking nearly an entire bottle of Wine of Cardui in one day and I had to treat her for the acute alcoholism

Another case was in this same town, a case where a young woman of 23 or 24, evidently without any peradventure of a mistake, suffered from pellagra, and had been taking Wine of Cardui for three or four months, on the idea that it would build her up, and the Wine of Cardui had at least some—the habit of taking it, and the continued taking of it, and her faith in it for the time being, had obviated the treatment that she should have had in all those three months, to build her up and to obviate the actual fundamental effects of the disease

Mr T J Scofield—I think that is all, Doctor

CROSS-EXAMINATION BY MR HOUGH

Dr Krohn was cross-examined in detail concerning the time when he first began to practice and the various positions which he had held since that time, which he described as in the direct testimony He testified that if he had a case which required gynecologic treatment, he would turn it over to a gynecologist In prescribing viburnum prunifolium he used the fluidextract This he did in certain functional disturbances of the pelvic organs associated with certain nervous conditions The results were unsatisfactory He used it about a year and a half in fifty-five or sixty cases, covering the years from puberty to the menopause but not the whole range of female troubles He feels that he gave it a sufficient trial to justify his conclusion that it was not therapeutically active The longest period of time in which he used it was about eight days in the same individual and twenty-four days within a period of three months, given three times a day and two teaspoonfuls at a dose When he gave the drug he expected to get the effect of the whole prescription and did not consider the question of the alcohol He does not know whether the alcohol had any deleterious effect

Q—If a doctor gives a medicine, or prescribes one, which has three or four different ingredients, he expects that each ingredient will have some definite action, don't he? *A*—No, not necessarily, because there are certain aromatics and certain menstruums and so on that are in the preparation They are not all—

Q—You mean you consider the alcohol in this purely as a menstruum? *A*—No, I did not. I thought it was preservative of the drug and extractive, perhaps That is my impression now I don't know really what I thought about it, ten years ago I know I did not think very much of the medicine, but what I thought about it, I do not know

The patient to whom the viburnum extract was given as described is now alive She did not get well of her pelvic trouble The nervous trouble was corrected in about four weeks The patient was a young woman, 20 years of age, a patient at Mercy Hospital, now residing in California Dr Krohn treated her in 1906 He did not in any case continue the viburnum more than a week He cannot remember that he used it through a menstruation period He did not figure how much alcohol the patient was getting

Dr Krohn was asked what medicines he used that were better than viburnum prunifolium when he abandoned it In menorrhagia he found fluidextract of ergot better In dysmenorrhea he secured better results with cannabis indica

Q—When you defined puberty, don't you think you confounded it with pubescence? *A*—Puberty and pubescence are the same thing, sir The period of puberty and the period of pubescence are the same though the term "pubescence" is used oftentimes in contradistinction to adolescence or senescence and is given a wider latitude, but really they mean the same thing

Q—Isn't puberty, properly speaking, simply the establishment of the menstruation? *A*—Not at all, sir, no more than the mere change of the voice of a boy is the establishment of puberty or the growth of hair on certain parts of the body is the establishment of puberty

Q—Wouldn't you say that the completion of the establishment of menstruation has been called puberty? *A*—I might say that it might have been so called, possibly erroneously so called, but puberty is, as I have defined it, the whole period of developmental change with all the incidents that occupy the time of this change from girlhood to womanhood and from boyhood to manhood when these nerves and organs are making their rapid growth and the groups of muscles the canalization of the heart is changing, the blood changes and all that is included in the term "period of puberty"

Q—You say, then, that the period of puberty could never be limited to one month or two months or even three months? *A*—The period of puberty can never be correctly limited to one month or two months or three months

Q—What do you mean by "correctly limited"? *A*—Because it would be a misuse of the term "period of puberty" It is impossible for all the changes that are included in the term 'puberty" to take place in three months, or to take place in one year

Q—Would you not say that puberty is the appearance of the menses, or menstruation, and that when that is established, that covers puberty? *A*—Not at all, sir As I have sought to answer explicitly before, that is not at all the meaning of puberty

Q—Is the definition of puberty a matter of individual opinion or is it based upon the definition given the term in medical works? *A*—

It is based upon—by 'period of puberty' you mean to include the changes that take place at this period Now then to take your question a moment before and we apply puberty to the boy as well, and puberty if it meant only the establishment of menstruation—we would have to have a male term and puberty would be the female term But puberty means all of those changes that take place at this time

Q—But when you use the term as applied to the female don t it relate to the establishment of the menstruation? *A*—There is no warrant in the world Mr Counsel for making it a more limited term in the life of the girl than in the life of the boy so far as the time element is concerned because it includes in addition to the changes peculiar to sex it includes also the same changes that take place in the boy

Mr T J Scofield—Doctor, won t you turn a little more this way, so that we can hear you

The Witness—I was getting interested in the question that is all

Mr Hough *Q*—Would you say that this definition is correct or incorrect The age at which —under the term puberty '—

The age at which the reproductive organs become functionally operative It occurs between 12 and 17 years of age and is indicated in the male by change of voice and seminal discharge and in the female by the occurrence of menstruation

Is that an incorrect definition? *A*—That is not technically a definition of puberty at all I do not think as you read it, really it defines puberty I wish you would read it again sir

Q— Puberty the age at which the reproductive organs become functionally operative ' *A*—There is the point, exactly, Mr Counsel

Q—Wait till I finish *A*—Oh

Q— It occurs between 12 and 17 years of age and is indicated in the male by change of voice and seminal discharge and in the female by the occurrence of menstruation *A*—Now if you analyze that definition yourself Mr Counsel you will see that it is the period at which such and such takes place and it is indicated—that is the expression of puberty in the boy is so and so and the expression of puberty in the girl is so and so and as you read that language as I understand the way you read it, it does not mean what you are trying to have me say it means

Q—Do you make a distinction between at the period of puberty, and during the period of puberty ? *A*—No A distinction can be made At the period of puberty and during—

Q—Not at the period of puberty — *A*—Well, at puberty means at the period of puberty

Q—Then you make no distinction between those two expressions? *A*—Not as a general proposition no

Q—May menstruation be established in one or two months time? *A*—Menstruation?

Q—In a girl? *A*—Menstruation itself yes may be established in a short time.

Q—Well when menstruation has been established isn t that the end of puberty? *A*—It is not It is simply a sign that puberty has gone so far that the menstruation is established but it is not complete it has not completed itself

Q—Is nubility a part of puberty? *A*—I do not know what you mean by nubility

Q—You do not know what nubility is? *A*—I heard of it yesterday for the first time.

Q—You never read it in any of the medical books? *A*—Oh I never recognized—I have never recognized the word as you have given it no sir

Q—Have you ever read Dr DeLee s book? *A*—Which book?

Q— 'The Principles and Practice of Obstetrics' ? *A*—No I read his original manuscript, however the notes of which that book is the outgrowth that is the typewritten copy some years ago

Q—Did you ever read Dr Webster s book J Clarence Webster? *A*—No I have not read much gynecology of recent years

Q—At any rate you do not know what nubility means? *A*—I have so stated

Q—Well now in common parlance isn t puberty used as referring to the establishment of the menstrual period? *A*—Common parlance—you mean among the mass of people that have to do with children?

Q—Yes *A*—No it is not so used Every schoolteacher knows better

The Court—Is it not generally understood by the laity that when a young girl begins to menstruate that she has reached the age of puberty?

A—Yes she has reached that age your Honor But I did not so understand the Counsel s question

Mr Hough—Now no matter what might be said in any advertisement a girl is not likely to take any medicine at that period unless she has some symptoms which she regards as painful or distressing is she? *A*—Well she is not likely unless—this is what would happen naturally a girl at that time has all sorts of erratic symptoms chiefly nervous however, and her mother or guardian or friends or some neighbor will say Why such and such is good for it, and they take it or send for some of it, and they get the directions that it is very good cannot do anything but good can do no harm, and that it is of great benefit.

Dr Krohn stated that if the patient went to a physician he would give her medicine if medicine was indicated, if there was malnutrition or anemia certain drugs would be prescribed In chlorosis drugs are given to increase the volume of blood and to increase the oxygen carrying capacity of the corpuscles In anemia due to the result of hemorrhages, blood transfusion may be indicated In other anemias, beefsteak, lettuce, spinach and green vegetables containing iron might be given

Q—You mean you don't give medicines now as a rule? *A*—I did not so state but I say I would try to give the medicine in a way that would cause the least change of program in that girl s life In other words I never like to impress a pubescent girl with the idea that she is sick, or is an invalid because at this stage she is so impressionable and so I like to make my remedial agencies fit into her daily life and program

Q—One moment. When you give a diet that way, you don t call that drugs do you? *A*—I said remedial agency

Q—I asked you did you ever give drugs for those conditions, drugs by the mouth? *A*—I have so stated, and I say, in addition —

Q—I am not asking you anything in addition *A*—I thought you said you wanted my entire treatment

Q—Do you give drugs by the mouth for any of those conditions? *A*—Yes

Q—What drugs? *A*—I have already stated that I gave bromid of gold and arsenic I have already stated that I gave iron I have already stated that I gave magnesium sulphate, and I think almost any of the salines increase the volume of blood

Q—Have you at any time ever given any of the fluidextracts to a girl at puberty? *A*—No, not for anemia

Q—Have you for any purpose? *A*—I thought you were still talking of anemia I do not recall any specific fluidextract that is specially given at that period

Q—I don t mean whether you recall any that is especially given I say have you ever given any at that period? *A*—Oh yes

Q—What have you given? *A*—As I stated before, I temporarily gave this fluidextract of viburnum for a year or so to certain pubescent girls I have given as I said before the extract of cannabis indica for certain other conditions I have given—if at the puberty period they would have certain congestion of the lungs and so on there are some of the fluidextracts in the loosening cough mixtures that I would give If a heart tonic were indicated—the mere fact that she was at puberty would not put her outside of the domain of receiving proper drugs for that condition

Q—You did not consider it dangerous when you gave her that drug did you? *A*—Gave her what drug?

Q—The drug which you say you gave The fluidextract of viburnum among other things and other drugs containing alcohol you did not consider that you were doing a dangerous thing for the girl? *A*—No not for the time and in the amounts I gave them as I said Six or eight drops of cannabis indica for four or five days, and the other medicines for a few days I did not consider that I was working any harm

Q—You know that cannabis indica is indicated as a habit forming drug do you not? *A*—Not in the time I gave it.

Q—Without reference to the time it is indicated as a habit forming drug isn t it? *A*—It is a drug that is used habitually by certain people.

Q—Well it is hasheesh, isn't it? *A*—Not exactly but here to explain myself—

Q—Why don t you answer whether it is indicated or is not indicated as a habit forming drug? *A*—I am trying to answer

Q—Well, answer yes' or no ? *A*—It is not indicated in the way I gave it and under my directions In the first place—

Q—You mean then that a habit forming drug a certain drug might be habit forming if given by one person but as given by you it would not be habit forming? *A*—If you will let me complete my answer—

Q—Just answer that question *A*—that last question will not be necessary

Q—Just answer that Do you mean to say that a drug would be habit forming if given by somebody else but if given by you is not habit forming *A*—I did not so state and I do not intend to so state. What I mean if I may explain—

Q—Go ahead *A*—is this in giving cannabis indica the fluid extract the maximum dose of eight drops for four or five days the patient not knowing what it is, not knowing what the solution is or what it contains and not having the solution that is accessible to them or that they can give any definite amount of and giving it under the restriction I was or that it would be given in the first place only enough of it prescribed only enough of it given for that case and for that particular instance and no one knowing what it is that is being given them or that is giving them the effect of freedom from pain, there is no way in the world in which they could increase the use of it because it is properly safeguarded in the way it is being administered

Q—That is just lately that it is being properly safeguarded isn t it? *A*—I do not think so I have always properly safeguarded it in my method of giving it.

Q—It is known as a habit forming drug is it not? *A*—And I repeat that it has been used as a habit forming drug

Q—Is it not a habit forming drug? *A*—It has the possibility of being a habit forming drug when it is given promiscuously without restriction and without any safeguard whatever as to amount To give it to your little pubescent girl and say 'Now here is some cannabis indica now take it, and give her a whole lot of it—then she can take it more, and more and more. But that is not the way you give it. Cannabis indica as I give it, is not a habit forming drug because of the method of my giving it.

Q—Referring to this habit forming drug you mean the cannabis indica and not the alcohol? *A*—Well the alcohol in eight drops of cannabis indica—

Q—That is mostly alcohol, isn't it? *A*—Well, if it were all alcohol, I would not consider eight drops of alcohol given at the most three or four times in any one course of illness, would be considered in any sense as a habit forming drug, as part of a habit forming picture, or of a deleterious picture

Q—You have given as much as eight drops at a dose of cannabis indica? *A*—I have, yes

Q—Don't you know that that is regarded as a dangerous dose? *A*—I know that it is not regarded as a dangerous dose

Q—Is it not so marked, as a dangerous dose, in the pharmacopeia? *A*—It is a dangerous drug, but you don't give eight drops at the first dose, as a rule, unless you know your patient, but the dose is anywhere from three to four or five to ten drops

Q—How many drops of alcohol at one time would you regard as a dangerous dose of alcohol? *A*—I don't regard—

Q—I mean, diluted with five times the amount of water? *A*—I don't regard, in terms of drops using the term "drops" as you seem to indicate, that any drop dose of alcohol was a dangerous proposition, unless you would run it up into the hundreds or scores or thousands of drops Then you would get to the danger point

Q—If you should take 48 drops of alcohol— *A*—In one dose?

Q—and add five times the amount of water, so that you would have a tablespoonful of liquid, would you regard that in one dose, as a dangerous medicine or drug? *A*—In one dose? Not necessarily

Q—Then you did not mean what you said on direct examination, that giving any medicine with alcohol in it was dangerous? *A*—I meant exactly what I said on direct examination, and everything that I said

Q—Do you now say that giving any medicine—giving any person any medicine which contains alcohol is dangerous? *A*—If you give it as medicine, as giving medicine as ordinarily employed, giving more than one dose If you restrict it to one dose, then I would accept your corollary

Q—Suppose a patient comes to you, and you give them medicine to be taken three times a day, which contains as much as 48 drops of alcohol with other things, would you consider that you were giving them a dangerous medicine, or that it was an improper thing? *A*—I would, if I gave them a pint or a quart of it, I certainly would

Q—I am talking about the first dose *A*—Just the dose, one dose, I would say 48 drops of alcohol—I would not think that giving it in that one dose would be a dangerous proposition

Q—Suppose you would give them that same medicine every four hours for four or five days Would you consider that dangerous? *A*—I would not give it

Q—You would not give it? *A*—No, sir

Q—What is the largest amount you would give them for as long a period as four or five days? *A*—It would depend entirely on the patient If it were an old drunkard that I was treating for some disease, I would have to put more alcohol in it

Q—We are talking about a girl at puberty, and I am confining myself to that *A*—I did not so understand you

Q—What is the largest amount of alcohol by percentage which you would consider safe to give a girl during that period, if you were going to keep up the treatment for as long as five days at a time? *A*—The largest amount I would give would be the least amount I could possibly give, and give the remedy that was indicated

Dr Krohn then stated that he is familiar with the drugs that fall in his own line, that he knows that there are drugs in the pharmacopeia that contain more than 48 drops of alcohol per dose, but they are not given without prescription He then testified concerning the quantity of alcohol received by the patient to whom he prescribed viburnum prunifolium for eight days in the various dosages given He gave the drug on the assumption that it would do good

Further hearing of the case was adjourned until 2 o'clock of the same day

May 5, 1916, Afternoon

TESTIMONY OF DR WILLIAM O KROHN (*continued*)

Dr William O Krohn resumed the stand for the defendants

CROSS-EXAMINATION BY MR HOUGH (*continued*)

Dr Krohn stated that he might give a different medicine for malnutrition at puberty than what he would use in cases of chlorosis or anemia He defined the difference between malnutrition and anemia He stated that the words "at the time of puberty" and "during the period of puberty" would mean the same thing unless qualified He would say that puberty is not pathologic, and that the processes which occur at puberty are not pathologic although certain individuals may have pathologic processes Pain may occur but is not necessarily pathologic He could not conceive of any condition in which viburnum prunifolium or drugs of this class would be indicated for anemia at puberty Medicines may be used during puberty for pathologic conditions

Q—For what conditions would medicines—or is medicine ever given by yourself, or the doctors, that you would not consider are pathological? *A*—Well, I would say, for example there are certain times when a laxative is indicated, the condition is not pathological, in the sense that there is any disease or a disease element, but you wish to avoid pathological conditions arising and you discount them by treating them in advance There might be some congestions—some that we would require to prevent pathological conditions arising There are certain congestions There might be certain nervous indications of an oncoming pathological condition that you can obviate by a little treatment. You can prevent the full explosion of a possible disease focus

Q—There is such a thing then as preventive medicine, is there? *A*—There is distinctly so, yes, sir

Q—And is that ever practiced in case of girls at puberty? *A*—Yes

Q—That is, to prevent something that might happen? *A*—It is to prevent something that you think is likely to happen, if you don't interfere

Q—What class of medicines would be used for that purpose as preventive medicines? *A*—It depends entirely on what the conditions are in each individual case There is no general medicine that you can prescribe for any period or for any sex or for any age, but you have to take up each individual, each distinct diseased condition as it presents itself

Q—When you were using viburnum, did you use it for any such condition as that, as preventive medicine? *A*—No, I do not think so I used it largely on its reputation, I used it as an entirety, a medicine that was expected to do certain things

Q—Have you ever used preventive medicines for girls at puberty? *A*—I have so stated—yes

Q—What medicines have you used? *A*—Well, it depends entirely again on what condition is presented at first. There are certain conditions that are due to stagnation of the intestinal tract There are certain conditions that are due to improper habits of sitting and dressing, which require a certain stimulation, the result of methods of living have to be corrected, in order to make their puberty life normal, animal development

Q—Now, what medicines have you used for any of those conditions? *A*—Well, as I have stated, if a laxative was indicated I would give the best one that is appropriate at that period, saline laxatives, with perhaps iron, if there is any indication of chlorosis—if the blood examination showed any anemia—

Q—Outside of laxatives what medicines have you given? *A*—If it was a congestion due, say, from functional retardation—

Q—Now, one minute You are talking about preventive medicine? *A*—Yes, and to obviate—

Q—That is where no pathological conditions exist? *A*—I understand

Q—Yes, all right *A*—But there are nerve signs, or other signs that a pathological condition may be imminent, and in order to prevent its realization, then you meet the condition

Q—Now, there are symptoms, I take it, which suggest the use of preventive medicines, are there? *A*—Symptoms, or signs, physical signs

Q—What would you call the symptoms or signs? What would they usually be? *A*—They would be—they might be one of many things, or might be a group of many things If, for example, you find as one sign, the school headache, a typical disease entity, as another sign you would find lack of—well, a sort of stasis because of lack of proper exercise, the enforcement of certain conditions—or, as you take it in these girls that work in the stores in unhygienic surroundings, you have to assist by supplying the thing that is called for We have signs that this girl is becoming pale, that she is becoming tired easily, that she has a certain type of headache, that she has a certain muddiness of the skin, that she has a certain paleness of the lips, that she has that greasy white tongue, all of these things are signs or indications that something should be done to prevent the girl from becoming a less efficient wage earner

Q—And viburnum has been, in the past at least, a very common remedy for that condition hasn't it? *A*—I don't know of any case where it is a remedy for that condition

Q—Don't you know that it has been very generally used in that condition? *A*—I do not know it

Q—Have you ever been connected with any girls' schools? *A*—Yes

Q—Don't you know that it is always kept and given there? *A*—I do not know that it is

Q—Don't you know that Hayden's viburnum compound is? *A*—I do not know that it is. I do not know—I know that where I was associated, at any rate, it was not in evidence

Q—What schools were you associated with where there were girls at puberty—the age of puberty? *A*—Well, I had charge of the examination of physical condition of the students that were indulging in gymnastics, et cetera, at the Hyde Park High School in this city, and one or two of the district schools in my vicinage, and also at Cleveland I had some work in that connection

Q—Was there a medical department in connection with these schools? *A*—You mean a medical man—

Q—Or a medical woman who dispensed drugs to girls who needed it for the purposes we have been talking about? *A*—Not so much drugging as proper advice and reference

Q—Is there not a medical department in connection with large stores in which they dispense medicine? *A*—There is, yes

Q—And don't they always give the viburnum in some form? *A*—I don't know that they do I do not know

Dr Krohn has not been connected with any school in which there are dormitories for girls He was connected with the medical department of Northwestern University and not with the College of Liberal Arts The latter has a medical department but he does not know that they dispense drugs

The menopause is frequently attended with pathologic conditions but it is a normal condition

Dr Krohn has used pulsatilla but he did not prescribe it for women He has also used cimicifuga He testified that alcohol is always a physical exhilarant in the initial stages The reaction is one of depression A large enough dose of a sedative drug in an alcoholic solution would counteract the effects of the alcohol He used remedies as combined and noted their final effect, without reference to the percentage of alcohol

Dr Krohn was then cross examined in detail concerning the case which he saw at Summerdale, Ala He does not know whether the husband of the woman is still living at that place *He still owns property in that vicinity* He was last there in March, 1914

He testified in detail concerning the incident in which he saw this woman She was in a state of confusion and delirium when he first saw her and began to show signs of coherency and clear perception about six hours afterwards The history of the case was given to him in part at each of his four visits The husband of the woman told Dr Krohn that she was a "Cardi Fiend" Dr Krohn saw a Cardui bottle in the room, there was about an inch of fluid remaining in the bottle The room was 12 feet wide There was no carton on the bottle Dr Krohn believed that he could not have been mistaken The patient stated that she had not taken any Cardui for some weeks before but she felt she had to have it, procuring it, she took more than she should have taken The patient stated that she had not been drinking anything else for about a month prior to this time She had taken the contents of the Cardui bottle with the exception of the fluid that remained, in ten hours time He knew what was meant when the husband of the patient called it "Cardi" as he had heard it called that by other natives in the same district

The patient was not well when Dr Krohn left as she had nausea and vomiting but she was beginning to take nourishment without regurgitating it

Q—Now would you say that that amount of this hypothetical medicine containing 20 per cent. of alcohol taken through a period of ten hours, would produce delirium in a person who was normal? *A*—Well it could and would in some individuals It would not in every individual It would not in the vast majority but there are those who have such little toleration of alcohol, taken on an empty stomach that it would

Q—Well let us take a woman who had not had any alcohol for a month would you say that amount would produce delirium? *A*—Yes it would in an impoverished person a hungry person a person without food in the stomach—it would do it—could do it in a great many cases

Q—Did you ascertain that she took no food during those ten hours? *A*—I know this they had no money for food I know as a matter of charity some of us people bought food and I know the women of the town were supplying food to this woman who spent her money for Cardui.

Q—How much money had she spent for Cardui? *A*—I know she spent for that one bottle, that is all I know

Q—How much was that, one dollar? *A*—That was the information they gave me.

Q—That is one dollar for Cardui in one month—is that the only money they had? *A*—Only that one day

Q—But they had not had any for a month before that? *A*—They had not had any dollar before that

Q—That is what I say they had not had but a dollar for a month—you ascertained that did you? *A*—I ascertained from the history that that was the first she had had for a month

Q—The man was working in the turpentine camp all the time? *A*—No it was not the turpentine camp as I stated—the man was working for this laboring crew that were gathering these fat stumps and shipping them to this turpentine factory

Q—At any rate, he was working steady? *A*—Steadily as work was offered

Q—Was he a white or black man? *A*—White

Q—How many children did they have? *A*—Four

Q—And what was his *name*? *A*—Well I have been trying for the last two minutes to think of the name. I think I can secure it for you

Q—Well Doctor you have known for quite a while you were going to testify to this? *A*—No I did not

Q—You didn t? *A*—No

Q—Did you try to think of it before today? *A*—Well no I had not thought especially with reference to the name it is simply the incident that impressed me But, as I said, Mr Counsel, I think I can secure the name for you and be very glad to supply it to you

Q—When did you first think of referring to this incident? *A*—Why, I had not thought of referring to it—I simply—it made an impression upon me at the time, and I think perhaps this morning a little discussion as to the testimony of some of these southern physicians as to what Cardui had done in certain instances—I simply *spoke of one or two instances in which I had seen it*

Q—Did anyone go there with you? *A*—There were ladies of the neighborhood or the village that took food there

Q—You mean at the hotel? That took food at his place? *A*—Took food to—from the hotel to this cottage home A little girl came over and asked for food first—that is the first that we knew they were in poor circumstances—they asked for food three or four days before this incident

Q—Do you know the name of the little girl? *A*—Her first name?

Q—Yes? *A*—No sir, I don t believe I do

Q—Is there a doctor in that place? *A*—There was no doctor there and I believe there is none there now

Q—You did not go there prepared to practice? *A*—I have already stated I was simply there on a business trip

Q—Where did you get the stomach pump to pump out the stomach? *A*—Well that was not a real stomach pump It was one that I improvised

Q—Well what did you improvise? *A*—I improvised a rectal tube in the end of a funnel

Q—But you said you used a stomach pump, didn't you? *A*—Well it was a stomach pump for that day and that night

Q—Now just how did that work? It was not a pump at all was it? *A*—It was a stomach pump, yes sir

Q—How did you work it? *A*—Filled the siphon full of water with soda in it and held it up after I pushed this tube down and held it up after it was filled full turned it over and the contents of the stomach ran out

Q—That is you— *A*—Siphoned it out

Q—You mean you sucked it out? *A*—Siphoned it out.

Q—How did you start it? *A*—As you start any siphon You have a tube full of water and then let go of it and it runs right out

Q—Well you have got to have the receptacle from which the liquid is drawn higher than the highest point of the tube don't you to siphon it out? *A*—Well that is easy if the person is in bed you can put the end of the tube on the floor where the basin is

Q—And lift her up? *A*—No you do not have to lift her up just lift the tube down on the—

Q—But it has to come out of her mouth, doesn t it so that the mouth must be lower than the stomach? *A*—No You can bring it right up from below it will come up through the mouth—

Q—Quite right, but when you do that, you have got to start to suck it haven t you— *A*—No

Q—to get it up there? *A*—You are mistaken

Q—Do you do anything of that kind? *A*—I said I did not, and it was not necessary You don t have to

Q—That is it will run uphill first, by itself, and then run down? *A*—It will run out on the floor and run out in the pan

Q—Now what else did the man tell you about how frequently his wife had gotten drunk on Cardui? *A*—There was nothing else as to any frequency

Q—Just one time? *A*—Yes, sir He was simply alarmed about her condition at that time

Q—Now what was the name of the company for which he was working? *A*—I say I think that he was working for *individuals* who took contracts like—probably one man who had a team would take a contract to haul out so much to haul at *so much a cord* haul this fat wood from the pine woods and pine stumps That is the way it is usually done there There is Pete Johnson—and four or five fellows that had teams that would hire these men to gather these stumps

Q—Did this man work for Pete Johnson? *A*—I do not recall

Q—What was the name of the—any of the ladies who took food to this family? *A*—A Mrs Barnes.

Q—What Barnes is that? *A*—Mrs A B Barnes.

Q—Do you know whether she lives there now or not? *A*—*The last* I heard of them they did She was there.

Q—Did she have a husband? *A*—She was in New York last summer with her little child—at Montclair N J but her *husband* was still living there. He was the superintendent of the tobacco plant and I think she has returned there after the summer s heat was over

Q—You mean the tobacco plant near there? *A*—Sir?

Q—You mean the tobacco plant where? *A*—The tobacco plant is at Summerdale, that is the warehouse of the *tobacco* company

Q—What were the names of the other ladies? *A*—Mrs. Francher and Mrs. Barnes are two that I remember as taking food there

Q—Did the both of them—or rather Mrs. Francher, does she still live there? *A*—I *think so* sir

Q—Was she a resident there then? *A*—Yes sir

Q—What was—what did her husband do? *A*—He was a land agent.

Q—You say you think you can get the name of this person? *A*—Yes I shall endeavor to do so sir

Q—In what way do you think you can get it? *A*—Well *I will* write—I thought first of writing to Mr Barnes because of his wife being concerned in taking food there—I thought I would write and find the name through *them*

Q—Did Mr Barnes go with *you* or *know* that you went over there? *A*—No—oh he probably knew that I was going there yes.

Q—Do you recall the name of the hotel keeper where you stayed? *A*—Yes Mr Morgan tive Wassermann, apparently present cases of true reinfection In the absence of an absolute means of determining when a cure is final and complete, however, there is even in some of these cases a possibility that it concerns a recrudescence of a previous infection rather than a reinfection, the weak point in many of the reports being the very short time between the first and second infections Nevertheless the repeated occurrence of such cases tends to indicate that the present methods of treatment, if accurately carried out, are capable of eradicating syphilitic infection, and from this point of view true syphilitic reinfection may be regarded as encouraging evidence of the efficacy of the treatment

COTTAGE SCHOOLS

The *Weekly Bulletin* of the New York City Department of Health calls attention to an article by Todd[1] urging the replacement of the present style of "tenement" schools by buildings erected on the cottage plan In favor of this plan is the reduction of risk from infectious disease, particularly so far as such risk is due to the mingling of children from different rooms in the halls of the large buildings Todd considers the ground necessary for the cottage school plan one of its chief assets Much is to be said in favor of the idea that school buildings are a poor financial investment and that a simpler and cheaper as well as more hygienic style of construction would be preferable The one story cottage school almost entirely eliminates danger from fire, especially when proper material is used in its construction The elimination of stairs and basement increases sanitary merits and decreases the cost of construction The elimination of elaborate and expensive ventilating systems also cuts down operating cost

FRAUDULENT ADVERTISING IN THE DISTRICT OF COLUMBIA

Congress prohibits fraudulent advertising in the District of Columbia Why not within the entire federal jurisdiction? Congress has passed a bill, which was signed, May 29, by the president, prohibiting "fraudulent" advertising in the District of Columbia By this act it is made unlawful to display or exhibit to the public in any manner whatever, whether by handbill, placard, poster, picture, film or otherwise, or to insert or to cause to be inserted in any newspaper, magazine or other publication printed in the District of Columbia, or to issue, exhibit or in any way distribute or disseminate to the public, or to deliver, exhibit, mail or send to any person, firm, association or corporation any false, untrue or misleading statement, representation or advertisement, with intent to sell, barter or exchange any goods, wares or anything of value The act further prohibits the use of any of the methods of advertising described above with the intent or purpose to deceive, mislead or induce any person, firm or corporation into employing the services of the advertiser The House of Representatives committee report on the bill expressly states that it is designed, among other things, to prevent quack doctors and fake dentists from advertising their fraudulent nostrums, impossible methods and alleged results If the president and Congress agree that a law to prevent fraudulent advertising is a good thing for the District of Columbia, will they not agree that a similar law would be equally good for interstate and foreign commerce and for the purification of the United States mails?

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[1] Todd School and Society, iii, 617

Medical News

(Physicians will confer a favor by sending for this department items of news of more or less general interest, such as relate to society activities, new hospitals, education, public health, etc.)

ILLINOIS

Personal—Dr Frank A Stubblefield has been transferred from the staff of the Alton State Hospital to that of the State Hospital for the Criminal Insane, Chester He has been succeeded at Alton by Dr Van Pelt

Typhoid Dangers—The state board of health reports that Pana, Christian County, and Tuscola, Douglas County, are menaced by an epidemic of typhoid At Pana there are thirty-eight clearly defined cases of the disease and at Tuscola fifteen cases have been reported Sanitary inspectors are at work endeavoring to ascertain the cause of the epidemic

Chicago

Memorial for Dr Favill—A committee has been organized to establish a memorial to Henry Baird Favill under the auspices of the City Club and Commercial Club Drs Frank Billings and Emilius C Dudley are the medical members of this committee, which hopes to receive subscriptions amounting to $250,000

Surgical Society Election—At the annual meeting of the Chicago Surgical Society, June 2, the following officers were elected president, Dr William M Harsa, vice president, Dr William Fuller, secretary, Dr Kellogg Speed, and treasurer, Dr Frederick G Dyas

Mercy Hospital Wing Completed—The completion of the new $300,000 addition to Mercy Hospital was announced, June 4, and the formal opening of the building will take place June 15 The new building is four stories in height, and is designed especially for the care of sick children The outstanding indebtedness of the institution now amounts to more than $200,000, and the opening of the building will mark the beginning of a campaign to raise funds to wipe out this deficit

MARYLAND

Transfer of Quarantine—An ordinance authorizing the transfer of quarantine from the city of Baltimore to the federal government was introduced in the second branch of the Baltimore city council, May 22, and was referred to the committee on health

Survey at Frederick—A medical survey of Frederick is being made by officials of the United States Public Health Service, working in cooperation with the Franklin County officials, the secretary of the state board of health and Dr William W Ford, professor of bacteriology in Johns Hopkins University

University of Maryland Alumni and Graduation Banquet—The first alumni and graduation banquet of the medical and the general alumni association of the University of Maryland was held, May 31, at the Emerson, and was attended by over 500 alumni and graduates The following officers of the general alumni were elected president, E John W Revell, vice president, Dr Albert H Carroll, treasurer, William Stichel, recording secretary, Dr F V Rhodes, corresponding secretary, Edward P Crummer, and advisory council, medical Drs Charles E Sadtler, Arthur M Shipley and James M H Rowland

Personal—Dr Eugene W Heyde, Parkton, has been appointed one of the health officers of Baltimore County to fill the vacancy caused by the death of Dr Joseph S Baldwin, Freeland——The police commissioners have elected the following physicians as surgeons to the board Dr Caleb N Athey, president, and Drs James M Craighill, William S Gilroy, Thomas P McCormick and Elliott H Hutchins——Dr Philip Briscoe, Mutual has been reappointed a member of the Board of State Aid and Charities by the governor——Dr Bowers H Growt gave a reception to the members of the faculty and fifty-four members of the graduating class of the University of Maryland Medical School recently at his home

MICHIGAN

Sterilization Law Ruled Unlawful—Probate Judge Daniel Zuhlke Lapeer has declared unconstitutional the act of the legislature of 1913 which permits sterilization of inmates of state institutions The state started the action in order to test the constitutionality of the law and the decision will be appealed

Personal—Dr C Hollister Judd Detroit, has been elected chief of the medical staff of the Florence Crittenton Home Detroit——Dr Frank B Walker Detroit addressed the Kalamazoo Academy of Medicine, May 9 on 'Fractures of the Base of the Skull At the same meeting Dr Archibald D McAlpine Detroit read a paper on Lung Abscess"——Dr James C Martin has been reelected health officer of Highland Park Detroit

MINNESOTA

Health Survey of St Paul.—Surg George B Young U S P H S has taken active charge of the sanitary survey of St Paul The survey will occupy about three weeks and is undertaken in cooperation with the heads of the state and municipal health departments

Hospital Notes—The new hospital of the Franciscan Sisters at Kettle Falls is now completed and the formal dedication exercises will occur June 15——It is proposed to double the capacity of St Luke s Hospital Duluth and to build a modern home for nurses at a cost of $125 000

Pathologists Elect Officers—At the annual meeting of the Minnesota Pathological Society in Minneapolis May 23 Dr Arnold Schwyzer St Paul the retiring president delivered the annual address and the following officers were elected president Dr Winford P Larson University of Minnesota Minneapolis vice president Dr John L. Rothrock St Paul secretary-treasurer Dr Frederick L Adair Minneapolis (reelected), and councilor Dr Alexander R Colvin, St Paul

NEW JERSEY

State Association Meeting—The Medical Society of New Jersey has arranged to celebrate its one hundred and fiftieth anniversary at Asbury Park, June 20 to 22 Headquarters will be at the New Monterey Hotel Dr William J Chandler South Orange is president of the organization

Medical Inspector's Association Meets—At a meeting of the New Jersey State Association for Medical Inspection and School Hygiene held in Newark May 20 Dr Dana, Camden was elected president Dr Fred M Corwin, Bayonne vice president, and Dr Webber, Hoboken secretary-treasurer

Personal.—Dr Charles S Pancoast Camden and Philadelphia has returned after several months in hospitals in Hungary and Bulgaria——Dr Edwin H Coward, health director of Atlantic City has resigned——Dr Anthony Bassler has been appointed consulting gastro-enterologist to Christ Hospital Jersey City——Dr Theodore J Jacquemin, West Hoboken has disposed of his property and has moved to California——Dr James K Stoddard Mount Holly has gone to France to engage in hospital work in the war zone——Dr Bernard R Lee Atlantic City suffered a fracture of the arm and other injuries in a collision between automobiles recently

NEW YORK

Public Health Laboratory—Governor Whitman signed the appropriation bill May 27 which includes a construction item of $65 000 for the purchase of land and erection of a laboratory building in the city of Albany for the state department of health The building will be located in the new Scotland Avenue section of the city

The Prevention of Blindness—The New York State Commission for the Blind has inaugurated a program and policy for the prevention of blindness It announces that appointment of an advisory council to which shall be referred all matters pertaining to the policy of the commission s work in prevention The members of this council are Dr Linsly R Williams Albany, deputy commissioner state department of health, Dr Haven Emerson, commissioner, city department of health, Dr Wilbur B Marple, Dr John E Weeks, Dr Alexander Duane Dr Herbert W Wootton and Dr Colman W Cutler, all of New York Very effective and compact exhibits in ophthalmia neonatorum, wood alcohol poisoning, midwives and trachoma have been prepared and will be loaned by the commission for the use of local boards of health, civic organizations clubs, or individuals interested and may be obtained by addressing the Secretary, New York State Committee for the Prevention of Blindness, 130 East Twenty-Second Street New York

New York City

Straus Milk Stations Open—Nathan Straus opened ten infant milk depots June 1 in addition to the eight that he maintains throughout the year This makes the twenty-fifth year of his work of providing pasteurized milk in the parks and on the recreation piers for the poor children of the city

New Hospital Building—The directors of this institution recently announced that a new hospital building for Har Moriah Hospital will be erected south of Fourteenth Street and east of the Bowery The new building is to cost $400,000, of which $59 000 is already in hand, and $50 000 more has been promised by an anonymous donor

Proprietary Medicines—*Bulletin 21* of the department of health states that since the ordinance has gone into effect requiring that all proprietary medicines shall either bear on their labels the name of the active ingredients or have them deposited in the confidential keeping of the health department, 3 197 preparations of this type have been registered with the department of health by 856 manufacturers

Women Doctors Dine—The alumnae association of the New York Medical College and Hospital for Women held its annual dinner at the Hotel Savoy on the evening of June 2 Twelve graduates of the class of 1916 were present A silver loving cup was presented to Dr Sidney Freeman Wilcox who has been for twenty-five years professor of surgery in the college It was announced that $62 000 has been received for the equipment of a new building for the college and hospital Mrs C A Wentworth and Mrs W S Gray have each given $5 000 to endow a bed

NORTH CAROLINA

Health of Winston-Salem.—Prof Charles Wardell Stiles, U S P H S has completed the sanitary survey of Winston-Salem——Dr Joseph J Kinyoun, Washington, D C., has accepted the position as whole-time health officer of the city, succeeding Dr Eugene P Gray, resigned

News About Sanatoriums—A tuberculosis sanatorium for colored people of Durham is to be established by the Civic League The institution will be able to care for ten patients——A sanatorium for Guilford County seems assured as Mr Caesar Cone Greensboro proposes to contribute $10 000 of the $30 000 needed, the King's Daughters have offered a site valued at $3 500, and one donation of $250 in cash has already been received

Hospital Items—A new hospital was opened in Goldsboro last month under the charge of Dr John Rainey Parker——The contract for the annex to the James Walker Memorial Hospital Wilmington has been awarded to the Northeastern Construction Company of New York——The trustees of the Old Ladies Home Belmont have offered to turn over its property to the city to be used as a charity hospital The property will cost the city $9,825

PENNSYLVANIA

Antispitting Signs—At the suggestion of Dr George J Van Vechten superintendent of the bureau of health of Scranton 500 blue and white enamel signs, 6 by 8 inches in size, and calling attention to the prohibition of spitting on sidewalks or public places, are being posted throughout the city

Personal—Dr Daniel A Webb, Scranton has arrived in Liverpool on his way to the war zone——Dr Theodore C Harter Bloomsburg is a candidate for the Democratic nomination for Congress——Dr Daniel P Gerberich Lebanon who has been a member of the state senate since 1904 has resigned his seat on account of ill health——Dr Daniel A Webb Scranton left for Nova Scotia April 13 to join the medical staff of the Eighty-Fifth Highlanders

State Takes Charge of Health Affairs—On account, it is said of the inactivity and indifference of the health boards in five municipalties of Mercer County they have been ordered discontinued and the state is reported to have taken active charge of the affairs The boroughs affected are Fredonia, Sheakleyville, Jackson Center, New Lebanon and Clarksville ——The state department of health took charge, May 22, of the administration of health affairs in Jennertown, Cassellman and New Baltimore, Somerset County, and Sistersville, Westmoreland County

New Obstetric Test Demanded—The following resolution was passed by the Bureau of Medical Education and Licensure of Pennsylvania at a recent meeting "Resolved, that candidates for examination who graduate after Jan 1, 1917, must produce evidence that, prior to graduation from a medical school, they have attended personally not less than twelve cases of obstetrics" This raises the standard of teaching of obstetrics in Pennsylvania from a minimum of six cases to a minimum of twelve cases prior to graduation with an additional minimum of six cases in the hospital in the hospital internship prior to licensure This practically insures that each applicant for the medical examinations of Pennsylvania has had twenty-five or more cases of obstetrics prior to licensure.

Philadelphia

Officers Elected—At the annual meeting of the alumnae association of the Women's Medical College of Pennsylvania, June 2, the following officers were elected for the ensuing year president, Dr Frances VanGasken, vice presidents, Drs Martha Tracy and Lida Stewart Cogill, recording secretary, Dr M Taylor, corresponding secretary, Dr Caroline Croasdale, and treasurer, Dr Ellen C Potter Dr Clara Marshall, dean of the college, announced a plan for increased endowment

Personal—Dr Archibald G Thomson is seriously ill in the Jefferson Hospital——Dr J Torrence Rugh delivered an address before the graduating class of the Nurses' Training School of the Methodist Hospital, June 1——Mr William H Hachenburg was elected president of the Jewish Hospital Association at the annual meeting, May 28 This is his fortieth year as president and his fifty-second year as a member of the executive committee——The National Board of Medical Examiners has elected Dr J S Rodman, permanent secretary, and has decided to hold its first examination in Washington, D C, beginning October 16

Jefferson Alumni Banquet.—The annual banquet of the Alumni Association of the Jefferson Medical College was held at the Bellevue-Stratford, Friday evening, June 2 Dr B Franklin Royer, president of the association, was the toastmaster and the speakers were Mr Alba Johnson of the board of trustees, Dr Wilmer Krusen, director of public health and charities, Dr Edward P Davis and Dr William Westcott At the business meeting held in the morning, the following officers were elected president, Dr J Coles Brick, vice presidents, Drs E Q Thornton and P Brooke Bland, treasurer, Dr Warren B Davis, and recording secretary, Dr H K. Mohler

Endowment for Jefferson—Jefferson Medical College is now 90 years old, and has been a chartered university since 1838 It has graduated 13,278 physicians, of whom 4,678 are in active practice Last session 676 students were enrolled The real estate and the equipment are valued at over $2,000,000 A movement has been inaugurated to secure, as soon as possible, at least $2,000,000 additional endowment for the college Mr Daniel Baugh, a member of the board of trustees, and founder of the Daniel Baugh Institute of Anatomy and Biology, has subscribed $100,000, provided an equal amount is raised on or before June 16 next The money so obtained goes to permanent endowment, the income alone will be used for such purposes as the trustees may from time to time designate Only $20,000 remains to be raised and alumni are urged to subscribe

Dispensary Dedicated—June 1, a granite dispensary building opened a few weeks ago at Seventeenth and Summer Streets by the Philadelphia Orthopaedic Hospital and Infirmary for Nervous Diseases was dedicated to the memory of the late Dr S Weir Mitchell, who was one of the founders and for many years head of the staff A dedication address was made by Dr William W Keen Attached to the front of the dispensary is a stone tablet on which is inscribed in bronze, "S Weir Mitchell Memorial, Philadelphia Orthopaedic Hospital and Infirmary for Nervous Diseases, 1915" Another tablet in bronze in the main waiting room contains the following legend "This Building is Dedicated by His Friends and Patients in Memory of S Weir Mitchell, Founder, Physician, Consultant, Manager, 1872-1914 Through these successive offices during forty-two years he gave to the sufferers within the hospital, learning, wisdom tenderness, to ease their pain, to hearten the discouraged, to lighten their burden"

VIRGINIA

Health Bulletin—The state board of health has distributed to the farms of Virginia a bulletin entitled "Farm Health Insurance" which explains the prevention of the common diseases of summer, and shows how farms can be made hygienic and flies abolished

Personal—Dr Stuart McGuire was awarded the degree of LL D by Greater Richmond College at its closing exercises, June 7——Drs John B Halligan, Smoky Ordinary, and William C Powell have been elected city physicians of Petersburg, succeeding Drs W Preston Hoy and Claiborne T Jones, resigned

State Public Health Officers Meet.—At the annual meeting of the Virginia Public Health Association, held at Newport News, May 9 and 10, the following officers were elected president, Dr Ennion G Williams, Richmond, vice presidents, Drs C Curtis Hudson, Danville, and W H Hick, University of Virginia, secretary-treasurer, Dr W Brownley Foster, Roanoke, and assistant, Dr Roy K. Flannagan, Richmond The principal address of the meeting was delivered by Asst Surg-Gen Henry R Carter, U S P H S, on "The Control of Malaria"

WASHINGTON

Antituberculosis League Consolidated—At a joint meeting of the Antituberculosis League and the Red Cross Seals Bureau in Seattle, the two bodies were consolidated and Surg Bolivar J Lloyd, U S P H S., was elected president, and Dr James E Crichton, vice president.

Board on Medical Education—At a meeting of the regents of the University of Washington, held in Seattle, the following advisory board on medical education, as related to the university, was appointed Drs Frederick Epplen and Wilson R Johnston, Spokane, Dr Cornelius J Lynch, North Yakima, Dr John R Brown, Tacoma, and Drs James B Eagleson, Clarence A Smith, Donald A Nicholson, Curtis H Thomson and Don H Palmer, Seattle

Personal—Dr Edward A Rich has been appointed health officer of Tacoma, succeeding Dr Edwin A Montague, resigned——Dr Henri L Petit, Chehalis, has been appointed local surgeon for the Milwaukee System——Dr Spiro F Sargentich, Tacoma, who has recently returned from Serbia, was the guest of honor at a dinner given by Dr James R. Yocom After dinner he entertained the guests with stories of his experiences during the invasion of Serbia——Dr Edgar C Lee, Seattle, has returned after Red Cross work in France——Dr E Clements Leach has resigned as a member of the staff of the Seattle City Hospital and will practice in Mount Vernon

WISCONSIN

Sanatorium Project Fails—The Tri-County Tuberculosis Sanatorium scheme undertaken by Waukesha, Walworth and Jefferson counties has met with a serious check, as Jefferson County has turned down the project completely and Walworth County has postponed action until its November meeting The Waukesha County Board, a short time ago, voted to bond the county for $50,000 in support of the sanatorium plan if the other counties agreed

Clinical Tuberculosis Meeting—The Wisconsin State Medical Society with other medical and surgical organizations of the state, and the Wisconsin Antituberculosis Society, held a clinical tuberculosis meeting in Milwaukee, June 6 to 10 On the first day a public meeting was held at which Dr Francis M Pottenger, Monrovia, Calif, delivered an address on "Tuberculosis, a Curable Disease" On Wednesday morning there was a clinical demonstration of diagnosis of tuberculosis at the Children's Dispensary and Hospital by Dr Pottenger and others At the same time there was a demonstration of surgical cases at the Children's Hospital At noon automobiles were provided to transport the visitors to Muirdale Sanatorium, where they were the guests at luncheon of Dr Glenford L Bellis Wednesday afternoon there was a physical diagnosis clinic of tuberculosis by Dr Pottenger, checked by the Roentgen ray under the direction of Dr E H Skinner, Kansas City, Mo On Wednesday evening the dinner of the Milwaukee County Medical Society occurred and on the three following days there were demonstrations of the diagnosis of tuberculosis and various medical and surgical tuberculosis clinics

CANADA

Ontario Health Officers Meet—The medical officers of health in Ontario met in annual session on May 30 and 31 In the absence of the president, Capt Angus W McPherson Peterborough, in France Dr A J Macauley, Peterborough presided Dr William H Park, director of laboratories of New York gave an address on the work of his department in reducing the death rate among children from diphtheria A very spirited debate was launched on the question, Should the Breadwinner be Quarantined? Dr George R Cruickshanks, Windsor discussed removal of tonsils Maj William D Sharpe, Brampton and Capt Ruggles George, Toronto, the former from Serbia and the latter from France, gave some interesting details of sanitation in war time Dr Alan G Brown of the Sick Children's Hospital, Toronto, advocated separate hospitals for children with tuberculosis Dr Kidd, Lambton, stated that 40 per cent of the milch cows in Ontario were tuberculous The following officers were elected president, Dr A W McPherson Peterborough, vice president Dr Thomas A Vardon, Galt, and secretary, Maj John W S McCullough, Toronto The next conference will be held in Toronto, May, 1917

Personal.—Hon Dr Beland M P, ex-postmaster general of Canada has been released by Germany as a prisoner of war At the outbreak of the war Dr Beland was in Belgium where he had just been married He immediately volunteered for service in the Belgian Army Medical Corps He was taken prisoner at the capture of Antwerp It is understood Dr Beland has journeyed to Holland, where his wife has been ill for some months and that he will return to Canada as soon as her health warrants the journey being undertaken ——Lieut-Col John Taylor Fotheringham Toronto medical officer with the second Canadian Overseas Force in France has been created a Commander of the Order of St Michael and St George.——Dr Frederick Montizambert, director-general of public health Ottawa, Ont., is listed among the recipients of King s birthday honors, having been created a C M G——Lieut-Col Robert D Rudolf, Toronto, who has been on active service since the outbreak of the war, has returned to Toronto Leave has been granted him to remain for the present in Toronto so that his war experience may be of service to the University of Toronto during its summer session in medicine——Dr Norman K. Wilson Toronto who went through the Dardanelles campaign has been appointed chief of the nose and throat department of the Ontario Military Hospital, England with the rank of major ——Dr Edna Guest, whose home is at Lucan Ont, is the first Canadian woman physician to receive a government military appointment since the outbreak of the war She has been appointed by the War Office to a post in the Northamptonshire War Hospital at Duston, with the rank of captain——Dr Honoria Keer, who is now in Corsica with 6 000 Serbian refugees was born in Toronto, but is a graduate of the University of Glasgow Dr Keer first worked in Serbia and for a time at Saloniki——Lieut-Col Thomas Bedford Richardson Toronto who has been commandant of the hospital at Exhibition Camp Toronto has been appointed commandant of the new Convalescent Hospital in that city which is located in the building of the old Toronto General Hospital——Dr N M Keith Montreal, has left that city to serve with the Harvard Medical Unit in the British Army Medical Service and will shortly sail for England——Dr John L. Chabot, M P Ottawa, Ont., is to accompany the detachment of members of the Canadian and other overseas dominions' parliaments on a visit to the trenches in France.

GENERAL

Definitions and Standards for Milk and Milk Products—The United States Department of Agriculture will give a public hearing in Chicago June 13 and 14 on definitions and standards for milk, cream, condensed milk, and other milk products

Growth of Red Cross—The campaign to increase the membership of the American Red Cross to 100 000 which was inaugurated a few weeks ago, has been successful and the membership has now passed the desired mark and the campaign is still going on

The Fight Against Cancer—The American Society for the Control of Cancer which is directing a nation-wide campaign of education in this regard notes the publication by the Central Midwives Board of England of a new circular on 'Cancer of the Breast' prepared by Sir Francis H Champneys F R C P., chairman which has been distributed to the public as well as to the midwives In this he urges the prompt and early treatment of all lumps in the breast

Wine of Cardui Suit—During the week ending at the time of going to press the attorneys for the plaintiff—The Chattanooga Medicine Co—have read numerous depositions from Southern doctors and others, and have presented impeachment witnesses to contradict testimony given by witnesses for the defendants Dr Thomas G Atkinson, Chicago, testified as an expert The attorneys for the plaintiff announced that they expect to close their case by noon Thursday, June 8

Railway Surgeons Organize—The first annual meeting of the local surgeons of the Pere Marquette Railroad Company was held in Grand Rapids, May 24, under the presidency of Dr Frederick C Warnshuis, Grand Rapids, chief surgeon of the company The following officers were elected president Dr Virgil L. Tupper, Bay City, Mich , vice presidents Drs John J Reycraft Petoskey, Mich and Alexander J Turner St Thomas, Ont, and secretary-treasurer, Dr Lewis S Ramsdell, Manistee Mich The association decided to hold meetings semiannually

Procedure for Admission to the Government Hospital for the Insane to be Changed—A bill has been introduced into Congress to authorize the admission of insane residents of the District of Columbia and of other insane persons found in the District to the Government Hospital for the Insane, without trial by jury as now required by law If a person committed without a jury trial, or any relative or friend in his behalf is dissatisfied with the order of commitment he may within ten days appeal and thereupon a jury must be summoned and the case tried by jury The court is not to require the presence of the alleged insane person at the hearing unless for good reason it shall so direct

Aid for Belgian Physicians—The report of the treasurer of the committee of American physicians for the aid of the Belgian profession shows no contributions for the month of May 1916

Previously reported receipts		$7 941 86
Previously reported disbursements		
1 625 standard boxes of food at $2 20	$3 575 00	
1 274 standard boxes of food at 2 30	2 930 20	
353 standard boxes of food at 2 28	804 84	
Total disbursements		7 310 04
Balance		$ 631 82

F F Simpson M D treasurer
5 Jenkins Arcade Building Pittsburgh

Examination for Clinical Director—The United States Civil Service Commission announces an open competitive examination for clinical director at the Government Hospital for the Insane, Washington D C June 27 The salary is $2 000 a year with maintenance Applicants must be graduates of medical schools of recognized standing must have been in actual charge of the medical service of an institution for the insane for at least five years, must have received special training in psychiatry and must have contributed to the medical literature on the general subject of insanity, or by report of cases must be 35 years of age or over and applications must be filed with the commission at Washington prior to June 27

National Leprosarium Bill—The House of Representatives May 4 passed House Bill No 193 providing for "the care and treatment of persons afflicted with leprosy and to prevent the spread of leprosy in the United States The bill provides $250 000 for the preparation of a home for lepers including the erection of necessary buildings the maintenance of the patients and the pay and maintenance of the necessary officers and employees until June 30 1917 The bill further suggests that any abandoned military naval or other reservation suitable for the purpose or as much of it as may be necessary, with all buildings and improvements thereon be transferred to the secretary of the treasury for the purpose of said home or homes

Examinations for Army Medical Corps—Preliminary examinations for admission to the Army Medical Corps to fill more than 100 vacancies will be held July 17 and August 14 Applicants must be between 22 and 30 years of age, graduates of reputable medical colleges and must have had at least one year s experience as intern after graduation Applicants successful in the preliminary examination to take a course of training at the Army Medical School Washington, for eight months during this time receiving the pay and allowance of a second lieutenant which amounts to about $215 a month Before entering the school the candidate must agree, if commissioned to serve at least five years in the Medical Corps At the termination of the course at the school he is assigned to duty at a military post Medical officers are furnished with best of current medical periodicals recent books ample equipment for service and the laboratories at military posts are equipped for research work

Warning—It is reported that a young man is calling on physicians in various parts of the country, giving the names L D Grant, H E Peters, R A Douglass or F C Schneider, and soliciting orders for subscriptions to medical journals and for medical books, for which he is not an authorized agent He is slender, dark, with dark hair combed straight back, and he shows his teeth plainly when talking He gives a receipt bearing the heading of some society or association such as the United Students' Aid Society, the Alumni Educational League or the American Association for Education He represents himself as a student working his way through college and trying to get a number of votes to help him win a certain contest The societies mentioned do not exist, and physicians should be on the lookout for him When last heard from he was in Omaha and is believed to be working his way westward

Bequests and Donations—The following bequests and donations have recently been announced

Home for Consumptives, Brooklyn, Home for Incurables, Brooklyn, Home for the Blind Brooklyn, each $10,000, German Hospital, New York, Long Island College Hospital, Brooklyn, and St John's Hospital, each $5,000

Negro Hospital, Little Rock, Ark, a donation of $1,000, contingent on the subscription of a sufficient sum of money for reopening and maintenance

University of Pennsylvania for the establishment and permanent endowment of a professorship of surgical research, $150,000 as a trust fund Drs William J Mayo and Charles H Mayo, Rochester, Minn, $10 000 by the will of Dr J William White

Visiting Nurses Service of the Henry Street Settlement, New York, a donation of $100,000 for endowment, by Mrs Elisabeth Milbank Anderson

Asheville (N C) Mission Hospital $10,000, to endow a bed in memory of Edwin Hayden Herrick, and $10,000 for the maintenance of a free bed or beds in memory of Leroy Herrick, by the will of Mrs Jeanette H Francis of Hampshire County, Mass

Allentown (Pa) Hospital $5,000, by the will of Frank R Stine

Lutheran Hospital, New York, $3,000, by the will of Mrs Anna Hess

Montefiore Home, and Home for Aged and Infirm Hebrews, New York, each $1,000, by the will of Mrs Rachael H Pfeiffer

Jewish Hospital Association of Philadelphia, $20,000 for the endowment of a perpetual free bed in memory of Martin and Theresa Siedenbach, Federation of Jewish Charities, Philadelphia, $20,000, and Jewish Foster Home and Orphan Asylum, $20,000, by the will of Henry Siedenbach

WAR NOTES

Work of Surgical Dressings Committee—The Surgical Dressings Committee of Boston appeals for further funds for the carrying on of its work and reports that since October the number of volunteer workers under this committee have increased from 400 to 740, that eighty-seven branches have been established and that the shipments of surgical dressings abroad since November have amounted to 1,169,067 dressings, all of which were sent to the war hospitals of the allies The appeal for funds is endorsed by the Surgeons' Advisory Committee and by the Financial Advisors

Red Cross Supplies Appreciated—Letters of appreciation of the shipments of medical and surgical supplies to the Austrian Red Cross have been made on behalf of that organization to the American Red Cross by Gen Oskar von Zednik in which he states that the consignment shipped February 4 has reached Austria in perfect condition——The director of the Belgian Red Cross work in Calais, France, gratefully acknowledges the receipt of eight cases of war relief supplies shipped by the American Red Cross——The receipt of six cases of clothing for destitute children in Flanders is acknowledged in a grateful note—The Duchess of Sutherland, writing from Red Cross Hospital No 9, British Expeditionary Force, sends her grateful thanks for three cases of supplies recently received——Dr Joseph A Blake, surgeon in chief of the French Military Hospital, has received two cases from the American Relief Clearing House——Sir William E Garston, chief of the stores department of the British Red Cross, sends grateful thanks to the joint war committee for twenty cases of war relief supplies sent by the American Red Cross——Dr Ravenig writes from Rouen acknowledging the receipt of an American Red Cross shipment——The Marchioness of Aberdeen acknowledges the receipt of nine cases of war relief supplies received through the British Red Cross stores department, London, from the United States——Herr von Schelling, on behalf of the Central Committee of the German Red Cross, acknowledges receipt of seventy packages addressed to Dr Frederick Cameron and forwarded from the American Embassy, Berlin These packages have been forwarded to Frankfort, Hamburg, Wiesbaden, Bremen, Cologne, Hannover, Hirsau and Munich, as desired

PARIS LETTER

Paris, May 11, 1916.

The War

TRENCH FOOT

Drs V Raymond, of the military hospital of Val-de-Grace, and J Parisot, of the Faculte de medecine de Nancy, have just communicated to the Academie des sciences an interesting study of trench foot They consider the condition a peripheral neuritis Among the various etiologic causes which have been invoked, Raymond and Parisot attach importance only to cold damp They were led to the idea of a localized infection of the foot and set themselves to seek for the agent They have isolated a mold from the lesions, and by inoculation of pure cultures of this fungus in animals have been able to reproduce typical lesions similar to those observed in man, that is to say, edema, blisters and eschars They conclude that the condition called trench foot or frost bite of the foot is a mycetoma comparable to Madura foot It is not really a frost bite but a mildew of the foot. The fungus is found ordinarily in the infected soil, in straw, manure, etc, and it is brought into contact with the feet by the mud of the trenches It penetrates the tissues by excoriations or by the matrix of the nails Almost all the men who have remained in the trenches any time are afflicted with onychomycosis The local fall of temperature, resulting from standing in the water, favors the implantation of the fungus, for this parasite has its optimum development between 25 and 30 C (77 and 86 F)

These observations permit of indications for prophylaxis and therapeusis, namely, cleaning and disinfecting the feet by means of soap and camphorated alkaline, or better, borated solutions The results have been excellent Edema disappears in three days, and the neuritic pains in from fifteen to twenty days The eschars, characteristic of the graver forms are cured more slowly, but the treatment prevents the extension of the lesions, so much so that though the number of cases has been large, amputation of the foot has never yet been necessitated

MEDICAL QUALIFICATIONS AND PROMOTION

In a previous letter I have dealt with the decree providing for the special promotion of physicians and pharmacists in possession of certain academic or institutional qualifications (The Journal, Feb 12, 1916, p 522) M Prat, a deputy, has just drawn the attention of the minister of war to the fact that even though they may not belong to an academic body, physicians and pharmacists, owing to their academic qualifications and their scientific work, present special guarantees of knowledge and experience The deputy suggested that these qualifications and work should be accorded a fixed value and not one varying with the personal ideas of district officials, so that those officers whose reputation was beyond dispute should be assured a rapid promotion to higher rank and a military situation equivalent to their scientific position, in the same way as has been done for members of the teaching body M Prat received the following answer "In making promotions, special qualifications and scientific work of physicians and pharmacists are taken into account, but it does not seem possible to accord to these diplomas and work a fixed value giving the right to promotion"

THE ORGANIZATION OF THE CIVIL MEDICAL SERVICE

The minister of the interior and the undersecretary of state for the health service have been occupied with the organization of the medical care of the civil population, the supply of physicians having become insufficient in certain regions owing to the call to the colors of a number of physicians belonging to the auxiliary service or to the reserve It has been decided that the prefects and regional directors of the health service will deliberate on the distribution in the departments of the physicians who will be allotted to them In sectors having an insufficient number of physicians, the work will be carried on by surgeons of the army or of the reserve For recompense these will receive only their military pay and no fees The municipalities will provide them with traveling expenses or will furnish the means of transport

GRAFT TO SUPPLY LOSS OF A PORTION OF SKULL

At a recent session of the Societe des chirurgiens de Paris, Dr Maret showed several patients on whom he operated in May, 1915, after the following plan The graft consists of a portion of the external table of the skull, cut so as to be of exactly the same form as the area to be covered and a little larger This portion of the external table, covered with its periosteum, is completely detached on three sides, but on the fourth side, that neighboring the lesion the periosteum and fibrous adhesions are left and it is bent back on these as on a hinge The result is remarkable It is easier than would be thought to raise the external table of the skull bones (except, perhaps, those of certain regions, such as the wing of the temporal), especially in relatively young patients, those not over 40 years old

Personal

The Academie des Sciences has elected, as corresponding member in the section of medicine, Dr Yersin of Nha-Trang (Annam), former worker at the Pasteur Institute, well known for his work in bacteriology and especially on antiplague serum

Medical Epigraphy

Dr Raphaël Blanchard, professor at the Faculte de medecine de Paris, who interests himself greatly in the history of medicine has undertaken the publication of a *corpus* of all the inscriptions concerning physicians and biologists or those connected with medico biologic sciences The first volume of this interesting work has just appeared and contains no less than 1,258 inscriptions

LONDON LETTER

London, May 22, 1916

The War

THE EFFECTS OF THE WAR ON POPULATION

At the Royal Statistical Society two interesting papers on this subject were read Sir J Athelstane Baines showed that the relative number of the marriageable of both sexes in the population has risen considerably since 1871, but that the number who marry is proportionally smaller There is also a tendency to marry later, thereby shortening the productive period, and for the married to have smaller families A great decline in the birth rate had been the result especially since the beginning of the century Owing, however, to a similar decline in the death rate the rate of natural increase of the population, though generally on the down grade had been falling more rapidly of late as the births had been declining in number more than the deaths The distribution of the population by age and sex had been materially affected In regard to age the diminution of the number of children, which set in in the late seventies of the nineteenth century at first raised the proportion of adults in the prime of life and at the most productive ages It also tended to lower the death rate, which is at its lowest during adolescence and early middle life But as the diminution continued the people of middle life began to pass into the ranks of veterans among whom the mortality is almost as high as at the beginning of life, the death rate therefore tended to rise and the population to be older not by reason of greater longevity, but from the lack of reinforcements from below As the numbers at the productive ages grew smaller, the birth rate tended to decline, irrespective of less or later marriage or the voluntary restriction of childbearing As the mortality of females is considerably lower than that of males and as it is the men chiefly who emigrate the balance of sex is slowly inclining more and more on the side of women The short supply of children is not entirely irremediable, since it may be somewhat counteracted by the measures now being put into force for the preservation of infant life

Mr J W Nixon discussed the effect of war on national vital statistics He analyzed the statistics of births deaths and marriages in France and Prussia for the period of 1868-1873 and showed that both countries experienced a rise in the death rate in 1870 and 1871—the increase in the number of "civil' deaths being greater than the number of 'military" deaths This was especially marked in the case of France the number of "civil" deaths being 437,000 more in 1870-1871 than in 1868-1869 when the number of "military" deaths was at the most 150 000 The rise in the death rate was felt at all ages and shared equally by the two sexes Not only the two belligerents but the three surrounding neutral states of Belgium, Holland and Switzerland all showed a period of maximum mortality in 1871 England and Wales remained unaffected After the war, rapid recoveries set in in all countries except Prussia, the death rate in France falling in 1872 to 22 per thousand the lowest on record. A serious fall in fertility was experienced by France and Prussia in 1871, and the three neighboring neutrals similarly suffered a reduction in their birth rates There was a sudden decrease in marriage rates in France and Prussia in 1870 it was partly made up in 1871 on the conclusion of peace, but the year 1872 was a 'boom year in both countries, the marriage rate reaching the highest on record In the present war, England, France and Germany are experiencing a serious fall in the birth rate The death rate has not been seriously affected in England, the slight rise in 1915 being due to some extent to the bad winter and to an epidemic of measles On the marriage rate the effect has been the reverse of that in the Franco-Prussian war, a large rise having taken place last year The theory advanced early in the war that it was having the effect of increasing the proportion of male births—an old superstition—was found to be groundless The serious effect which the war has on the vital statistics of the nation is shown by the fact that the "natural increase' of population in 1913 was 377,000 In 1915 it fell to 252,000, exclusive of deaths of soldiers abroad

THE TESTING OF RECRUITS' HEARTS

As shown in previous letters, the military authorities are employing to the full all kinds of specialists both at the front and in this country The danger of accepting as recruits men whose hearts are not sound enough to stand the rigors of soldiering has been obviated in London by a new scheme In addition to the routine examination which every recruit undergoes at the enlistment depots, it has been arranged that every recruit whose heart shows the least abnormality shall be examined by specialists at the National Hospital for Diseases of the Heart "Please run up those stairs to the roof and back" the recruit is told On his return to the ground floor his pulse rate breathing rate and blood pressure are taken and compared with the pulse rate, etc, obtained before the candidate went stair climbing After a rest of three minutes the pulse and blood pressure are again measured The electrocardiograph is then employed and a tracing obtained of the heart s action From all these data the specialists then decide whether the candidate is fit for Class 1 general service at home and abroad Class 2 field service at home Class 3, garrison service, Class 4, labor purposes and sedentary work or is unfit for any army service To make doubly certain of not admitting unfit men, each recruit is separately examined by two specialists

Diphtheria from Cats

An outbreak of diphtheria in an orphanage has been traced to cats Sixty-nine cases which were the great majority of those which occurred came from the boys' house After many investigations and precautions, such factors in the production of the disease as sanitary defects contaminated water supply and food were eliminated Realizing that there must be a carrier of the bacillus, the physician in charge decided to turn his attention to the cats and took swabs from all their throats On bacteriologic examination it was found that the four cats from the boys side of the orphanage were suffering from diphtheria the four cats from the girls' side, although showing other micro-organisms in profusion did not prove to have the true diphtheria bacillus The cats were destroyed and after that only ten more cases of diphtheria occurred They occurred within a few days, showing that the patients had already been infected when the cats were destroyed There have been no cases since

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Marriages

William Sidney Johnson M D, Carbondale Pa, to Miss Maude Irene Dakin of Washington, D C., June 3

Alfred Dean, M D Grand Forks N D, to Miss Helen LaRue Schurtz of Negaunee, Mich May 24

Harold Ward Stone M D Minneapolis to Miss Frances Carlin Murphy of Faribault Minn, May 15

Lionel Louis Albert M D Malden Mass., to Miss Gertrude Steinmetz of Yonkers, N Y May 22

Horace A Lowe, M D, to Miss Pearl Lines, both of Springfield, Mo, at Monett, Mo May 9

Robert Grier LeConte, M D to Mrs Susan Sturgis Stewart, both of Philadelphia May 24

Martin Henry Merbitz, M D., Chicago, to Miss Norma Helen Irasek of Milwaukee May 17

Hugo Mella M D to Miss Pearl Weed, both of Bismarck, N D, at Minneapolis May 27

Otto Carl Horst, M D, to Miss Rebecca Garrett, both of Springfield, Mo., April 27

George Nye Hiskey M D., to Miss Stella Elizabeth Uthe, both of Chicago, June 3

Deaths

William T S Dodds, M D, Indianapolis, Medical College of Indiana, Indianapolis, 1898, aged 42, a Fellow of the American Medical Association, associate professor of clinical diagnosis in Indiana University School of Medicine, Indianapolis, and professor of bacteriology in the Indiana Dental College, pathologist to the Indianapolis City Hospital and Dispensary and instructor in bacteriology at the Deaconess Hospital, Indianapolis, a specialist in diseases of the chest, who started the tuberculosis clinic movement in Indianapolis and served for two years as deputy coroner of Marion County, died at his home, May 22, from heart disease

Frank Parker Tays Logan, M D, Gloucester, Mass, Harvard Medical School, 1897, aged 49, a Fellow of the American Medical Association and a member of the Association of Military Surgeons of the United States, captain and assistant surgeon, Eighth Massachusetts Infantry, U S V, during the war with Spain, and assistant surgeon of the Eighth Infantry, Mass V M, surgeon on the staff of the Addison Gilbert Hospital, Gloucester, and lecturer on materia medica and therapeutics in the training school of the institution, died at his home, May 26

William Page McIntosh, M D, Surgeon, U S P H S, College of Physicians and Surgeons, Baltimore, 1882, aged 60, a Fellow of the American Medical Association and an active member of the Association of Military Surgeons of the United States, who entered the United States Public Health Service in November, 1885, was promoted to passed assistant surgeon, Nov 1, 1888, and to surgeon, May 20, 1890, and who was placed on waiting orders, April 15, 1915, on account of illness, died at Linwood, Howard County, Md, May 27

John Louis Masters, M D, Indianapolis, Louisville (Ky) Medical College, 1885, aged 56, a Fellow of the American Medical Association and American Academy of Ophthalmology and Oto-Laryngology, a specialist on diseases of the eye, ear, nose and throat, professor of clinical otology, rhinology and laryngology in the Indiana University School of Medicine, a member of the consulting staff of the City Hospital and Deaconess Hospital, Indianapolis, died suddenly at his home, May 25, from cerebral hemorrhage

Francis Barker Davison, M D, Factoryville, Pa, Pennsylvania Medical College, Philadelphia, 1853, aged 88, once president of the Lackawanna County (Pa) Medical Society and a member of the State Medical Society and American Medical Association, surgeon of the One Hundred and Twenty-Fifth Pennsylvania Volunteer Infantry during the Civil War, for thirty-eight years a practitioner of Fleetville, Pa, died at the home of his daughter in Factoryville, April 30, from senile debility

Nathan Jenks, M D, Detroit, Cornell University, New York City, 1899, aged 43, a Fellow of the American Medical Association, associate professor of obstetrics in the Detroit College of Medicine and Surgery, visiting obstetrician to the Women's Hospital and Infants' Home, Detroit, a member of the American Association of Obstetricians and Gynecologists and a fellow of the American College of Surgeons, died in Harper Hospital, Detroit, May 30, three weeks after a surgical operation

Charles Theodore Benner, M D, Tiffin, Ohio, Western Reserve University, Cleveland, 1878, Bellevue Hospital Medical College, 1882, aged 59, formerly a Fellow of the American Medical Association, a member of the Ohio State Medical Association, and once president of the Seneca County Medical Society, local surgeon of the Pennsylvania System, for one term a member of the city council of Tiffin, died in his office in Tiffin, May 23, from angina pectoris

John R McCullough, M D, Chicago, College of Physicians and Surgeons, Chicago, 1883, aged 80, formerly a Fellow of the American Medical Association, a member of the Illinois State Medical Society and Chicago Pathological Society, a practitioner for forty-three years, a veteran of the Civil War in which he served as assistant surgeon of the First Wisconsin Volunteer Infantry, and was a prisoner in Libby Prison, died at his home, May 4

Victor Davis Miller, M D, Mason and Dixon, Pa, Jefferson Medical College, 1861, aged 78, a member of the Medical and Chirurgical Faculty of Maryland, assistant surgeon of the Seventy-Eighth Pennsylvania Volunteer Infantry during the Civil War, coroner of Franklin County from 1864 to 1866, died at his home in Washington County, Md, just across the Franklin County line, May 25, from peritonitis

Lyman Ware, M D, Chicago, Northwestern University Medical School, 1866, University of Pennsylvania, Philadelphia, 1868, aged 74, a Fellow of the American Medical Association and a member of the Chicago Ophthalmological and Otological Society, a specialist on diseases of the eye, hospital steward of the One Hundred and Thirty-Second Illinois Volunteer Infantry during the Civil War, died at his home, June 1, from heart disease

Patrick M Kelly, M D, Kankakee, Ill, Washington University, St Louis, 1892, aged 55, a Fellow of the American Medical Association, for many years a practitioner of Litchfield, Ill, and health commissioner of that city, superintendent of the Kankakee State Hospital from August, 1913, until his resignation a few months ago on account of ill health, died in Colorado Springs, May 30, from nephritis

Walter C Overstreet M D, Sedalia, Mo, Missouri Medical College, St Louis, 1878, Bellevue Hospital Medical College, 1882, aged 58, a Fellow of the American Medical Association, and a member of the National Association of Railway Surgeons, consulting surgeon to the Missouri, Kansas and Texas system, formerly mayor of Sedalia, died in the Punton Sanitarium, Kansas City, May 25

Alonzo Lemuel Leach, M D, Cape May, N J, Jefferson Medical College, 1868, aged 71, formerly a member of the Medical Society of New Jersey, for twenty years a resident of Pennsylvania and surgeon of the First Pennsylvania Infantry, and demonstrator of the Philadelphia School of Anatomy, for several years president of the board of health of Cape May, died at his home, May 25

Clark Wasgatt Davis, M D, Cincinnati, Miami Medical College, Cincinnati, 1886, aged 52, a Fellow of the American Medical Association, medical director of the Union Central Life Insurance Company for many years, health officer of Cincinnati from 1900 to 1906, died at his home, May 25, from heart disease

M Fred Dattelzweig, M D, Chicago, Bennett Medical College, Chicago, 1898, aged 46, a Fellow of the American Medical Association, for many years assistant county physician of Cook County in charge of the North Side division, died at his home, May 30, from heart disease, complicating ptomain poisoning

Marion Delmar Ritchie, M D, Pittsburgh, University of Pennsylvania, Philadelphia, 1899, aged 42, a Fellow of the American Medical Association and a member of the American Academy of Ophthalmology and Oto-Laryngology, laryngologist to the Columbia Hospital, died at his home, May 24

William F Toombs, M D, Springfield, Mo, University of Louisville, Ky, 1880, aged 73, for twenty-five years a practitioner of medicine and later a druggist who moved three years ago to San Antonio on account of his health, died in the Springfield Hospital, May 20, from senile debility

Frederick W Lee, Tiskilwa, Ill, (license, Illinois, years of practice, 1877), aged 81, a practitioner for half a century, a veteran of the Civil War, formerly trustee and president of the village board of Tiskilwa, died at the home of his son in Tiskilwa, May 10

Henry Hardenbergh, M D, Port Jervis, N Y, College of Physicians and Surgeons in the City of New York, 1859, aged 81, vice president of the Barrett Bridge Company and director of the Port Jervis Waterworks Company, died at his home, May 29

Edward A Fox, M D, Cincinnati, Medical College of Ohio, Cincinnati, 1905, aged 34, local surgeon for the Big Four System, county infirmary physician of Hamilton County in 1909 and 1910, died in Bethesda Hospital, Cincinnati, May 6, from septicemia

Charles W Hine, Lonoke, Ark. (license, Arkansas, 1886), aged 71, formerly a Fellow of the American Medical Association, for many years a practitioner and druggist of Stanton, Iowa, died in a hospital in Chicago, May 16, from malignant disease

Willard Herbert Linder, M D, Clinton, Iowa, Marion-Sims College of Medicine, St Louis, 1896, aged 40, formerly of Des Moines and Story City, Iowa, died in the Agatha Hospital, Clinton, May 22, a few hours after an operation for appendicitis

John B Anderson, M D, Chetopa, Kan, Medical College of Ohio, Cincinnati, 1872, aged 68, died at his home, May 18

William H Davis, M D, Corydon, Ind, University of Louisville, Ky, 1882, aged 65, died at his home, May 18

Samuel H Bennett, M D, Mendon, Mich, University of Buffalo, N Y, 1865, aged 79, died at his home, May 14

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory, Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

THE WINE OF CARDUI SUIT

(Continued from page 1810)

May 8, 1916, Morning

TESTIMONY OF DR. R. L THOMAS

The court met pursuant to adjournment Dr R. L Thomas was called as a witness for the defendants

DIRECT EXAMINATION BY MR T J SCOFIELD

Dr R. L Thomas testified that he is a physician practicing in Cincinnati, Ohio He graduated in 1880 from the Eclectic Medical College, of which he is now dean and professor of the practice of medicine He is on the staff of the Seaton Hospital He treats diseases peculiar to women in his general practice, using medicines, local applications etc , he also uses mechanical means, such as pessaries and tampons He has not had any experience with cnicus benedictus or with viburnum prunifolium

There was then asked of the witness a hypothetic question similar to that asked of other witnesses He stated that he did not think that the hypothetic medicine would have any value in the treatment of uterine displacements as it would be impossible for this remedy to restore the ligaments after they were relaxed or to repair the torn perineum He did not think that the hypothetic medicine would be of any value in the treatment of vaginitis or in other forms of pelvic inflammations He stated that most likely it would be harmful by the excitation to renewed activity of the gonococcus by the use of a large quantity of alcohol

There was then read to the witness a quotation from the Home Treatment Book for Women concerning vaginitis The witness stated that it would be impossible for Wine of Cardui to act on the cause of this disease in a curative sense He believes it is not a scientific and specific remedy for this condition

The witness then defined in brief, amenorrhea, dysmenorrhea, menorrhagia and metrorrhagia, all of which are due to pathologic conditions He believed that the hypothetic medicine would be worthless in these conditions He considers the period known as puberty and menopause as normal and physiologic conditions He stated that in his opinion the remedy could not be any good and could not do any good to a physiologic condition and it might possibly do a great deal of harm by overstimulation, by disturbing the digestion or disturbing the nervous system The witness stated that the duration of the menopause is from one to three years and it is not necessarily a critical period in a woman's life He stated certain pathologic conditions which might occur in the menopause and stated that in this sense it was a critical time. He stated that it was very inadvisable to take Wine of Cardui regularly throughout the entire period as recommended in the Home Treatment of Women, page 38, which was read to him

Q—Why do you think that, Doctor? *A*—Well in the first place a great many of these changes do not affect unfavorably and you would be taking a stimulant for a normal condition In the cases that are inclined to be a degeneration you have these conditions as I stated a while ago You may have the degeneration of a malignant growth of the uterus or you may have it of the breasts or you may have it of the ovary and there is nothing in the remedy that I can see that would be efficacious in relieving those conditions

The witness stated that there was nothing in the hypothetic solution which would tend to repel the attack of diseases in the change of life He would object to the taking of the hypothetic medicine during the whole term of pregnancy Unless there was special difficulty, medicine would not only be valueless but might do harm He defined as a misstatement the following quotation from the Home Treatment for Women

> "No one need be afraid of taking Cardui during pregnancy Its action is gentle and strengthening, and it can never do anything but good'

Q—Why do you think it is a misstatement Doctor? *A*—I think a patient that would take a remedy that contained 20 per cent of alcohol for nine months—you might get a disturbance of the digestive apparatus you might get overstimulation, you would get a change in elimination and you would be very apt to get an addiction to the drug or at least there might be—a patient might be led into a desire to take the stimulant constantly

Q—What if any, might or would the effect be in your opinion of such a continued use of an alcoholic solution throughout the period of pregnancy of any of the special organs of the woman s body, that is the organs of elimination? *A*—It would impair the organs of elimination

Q—What would be the effect of it, do you think, if any, upon the kidneys? *A*—The tendency would be to be harmful We find nephritis—when we do find a morbid condition of the pregnant woman —it is very apt to be the kidney In fact, even under normal conditions we have our patients contribute samples every three or four weeks during the pregnant time to see whether there is any tendency to a nephritis which is the most serious lesion of a pregnant woman Alcohol tends towards nephritis to produce it

Q—By alcohol you mean—or by nephritis you mean Bright's Disease what we usually know as Bright s disease? *A*—Bright s disease commonly known as Bright s Disease

Q—I wish to read to you the following quotation, from the Ladies Birthday Almanac of 1909 published by the Chattanooga Medicine Company, and copyrighted by the Chattanooga Medicine Company I read from page 17

> 'Do you suffer from any of these symptoms of female complaints? Headache, backache sideache shoulder pains breast pains, leg, hip or thigh pains bowel pains, drawing pains bearing down pains dragging sensations, falling feelings inability to walk, dizziness numbness, nervousness, fainting spells morning sickness sleeplessness, tired feelings after walking inability to lift weights frequent urination morbid distaste for walking painful menstruation irregular menstruation, unnatural stoppage, too profuse, too often whites flooding weight of bowels straining at stool cramps sterility, general weakness, change of life, hot flashes cold flashes capricious appetite nervous delusions indigestion, loss of appetite sick headache."

Have you an opinion—what is your opinion as to the truth of these various statements?

Mr Walker—You did not give the date of that

Mr T J Scofield—In conclusion on page 17, following what I have just read to you appears the following

> Thousands of ladies who suffer from the above symptoms have obtained relief by taking Cardui, Woman s relief Try it It will help you

Mr Walker—What date was that?

Mr T J Scofield—I am reading from the 1909 almanac, page 17

Q—What is your opinion as to the truthfulness of these statements Doctor? *A*—Well the symptoms that are given there come from such a variety of causes, that it will be impossible for any one remedy or any combination of remedies to relieve all those conditions.

CROSS-EXAMINATION BY MR. HOUGH

Dr Thomas testified that he does not know carduus benedictus or centaurea Cnicus benedictus he stated is a principle of blessed thistle and he has never used it. He has not used carduus marianus to any extent. It is a vegetable remedy recommended for low conditions of the nervous system and atony of the liver It has not to his knowledge been used for dysmenorrhea, amenorrhea or irregular passive uterine hemorrhages His knowledge, he stated, is limited to his own experience. He has not read Ellingwood s Therapeutics on this subject or King's American Dispensatory on this subject. He recommends carduus marianus in one place in his work as a compilation reputed to be used for atony of the liver He does not use it himself at all

Q—Upon what authorities did you base your statement then? *A*—From reading from some prominent authors

Q—What were they? *A*—Of the homeopaths. The homeopaths used carduus marianus for liver troubles some liver troubles partly despondency in liver troubles

Q—Do you know whether there is any difference in action between carduus marianus and carduus benedictus? *A*—No sir I do not know the difference

Q—If the hypothetical question had read carduus marianus instead of cnicus benedictus would your opinion have been the same as you expressed it?

Mr T J Scofield—That is objected to

A—Just the same

Mr T J Scofield —He has already answered it, but the hypothetical question did not say carduus marianus

Mr Hough —I say, if it had said it I am entitled to vary the question to test the knowledge of the witness

The witness knows viburnum prunifolium, which he has used for dysmenorrhea What he has written on the subject is based on his own experience and that of other physicians Dr Thomas does not agree with Ellingwood on all the uses of viburnum He agrees that it is valuable as a uterine sedative in certain conditions

Q —Is viburnum prunifolium good in threatened miscarriage? *A* —In some cases of threatened miscarriage

Q —Is it not particularly indicated in habitual abortion? *A* —In a general way, depending upon the condition, abortion resulting from different conditions

Q —Is it not often efficient in controlling the morning sickness of pregnancy? *A* —Not in my experience

Q —But I am not asking it on your experience alone, but your experience and reading? *A* —That is all I can testify to, my experience in the use of the drugs

Q —No, your experience and reading Your familiarity with the literature on the subject? *A* —Yes, sir

Argument was then made by attorneys concerning the introduction of evidence based on what the physician has read

Q —Is it not a fact that in a number of cases, when given for menstrual irregularities or for the distress induced by uterine displacements in previously sterile females, pregnancy has promptly occurred, proving the influence of the agent in restoring normal functional ovarian activity? *A* —I do not know that it has had that effect

Q —Do you know that it has not had that effect? *A* —No, sir

Q —Is it not a fact that it is the proper treatment of irregular, sudden menstrual flow occurring during repetitions and long continued or violent inflammatory fevers, especially in young ladies? *A* —I did not catch that, the first part of your question

Q —It is the treatment of irregular, sudden menstrual flow, occurring during repetition and long continued or violent inflammatory fevers, especially in young ladies? *A* —No, sir

Q —You say that is not the fact? *A* —Not to my knowledge I never used it for that in that way

Mr Hough —Now I ask leave to read to the witness from Ellingwood on that subject

Mr T J Scofield —I object to that, if the Court please Dr Ellingwood is right over here

The Court —You may read from any book that he has written

Mr Hough —That the witness himself has?

The Court —Yes

Mr Hough —But the witness says he bases his opinion in part on what Ellingwood has written

The Court —As to viburnum prunifolium?

Mr Hough —I understood him so

The Court —He has not said that yet

To which ruling of the Court the plaintiff, etc , excepted

Mr Hough *Q* —Don't you base your opinion in part on what Ellingwood says in his Materia Medica, and Pharmacognosy? *A* —I base it so far as it meets the experience that I have had, certainly

Q —You mean you disagree with them if they state anything different from your own experience? *A* —Not necessarily disagree, no, sir but not necessarily believe all the statements

Q —In what cases have you yourself used viburnum prunifolium? *A* —I have used viburnum prunifolium for the condition where we have as a result of neuralgic conditions irritation resulting in expulsive character of pains, for instance, in dysmenorrhea If there is a sensation of bearing down, as if the patient was trying to pass something, expulsive pain, as an antispasmodic, in that condition Not all conditions of dysmenorrhea do I use it in

Q —How much alcohol was in the preparation which you used under those conditions? *A* —How much alcohol?

Q —Yes *A* —*In the preparation* I used, the specific tincture, it contains about 46 per cent

Q —Forty six per cent of alcohol? *A* —Of alcohol, yes, sir

The witness stated that he has never used senecio aureus It was used by the eclectic school as a uterine tonic It is a vegetable drug It is used in cases of leukorrhea

The witness does not know the amount of alcohol in it

Q —When you have medicines containing alcohol and use them, do you consider that the alcohol has a deleterious effect? *A* —I can not say I use them in that way Not in the way I use them

Q —You mean you can use alcohol with a deleterious effect—that is, your specific medicines, or you can use them with a beneficial effect, can you? *A* —The way that the specifics are used, they are used with a beneficial effect The way they are recommended, the short doses they are recommended in, it would have no deleterious effect

Q —Well, what is the dose recommended of cnicus benedictus? *A* —I do not know

ALCOHOL IN LLOYD'S PREPARATIONS

The witness does not know of Lloyd's cnicus benedictus but he has heard of it The dosage of Lloyd's prunifolium is from 3 to 5 drops in the form of a tincture

Q —Isn't the dosage a teaspoonful every hour or two? *A* —A teaspoonful of the tincture

Q —Of the specific medicine, viburnum prunifolium? *A* —No, sir

Q —(Handing bottle to the witness) Is this the medicine that you use, or that you are referring to? *A* —Yes, sir

Q —It comes in that form? *A* —It comes in that form That is never used a teaspoonful at a dose

Q —What does that say on there on the label? *A* —It says it is a specific medicine, black haw, one dram, which is a teaspoonful, water four ounces, and a teaspoonful of the mixture—

Q —Read what it says on the bottom *A* —Every hour or two A teaspoonful of the mixture, not the—

Q —How much alcohol would there be in the mixture? *A* —Well, there would be a teaspoonful of the mixture in four ounces of water The 46 *per cent* alcohol in four ounces of water and you would get a teaspoonful out of this water

Q —How much alcohol would you get in a day if you took that mixture every hour? *A* —Every hour you would get about ten teaspoonfuls of the mixture, and you would get probably 25 or 30 drops of the medicine in the course of a day, which would include—

Q —Did you say medicine or alcohol? *A* —I said the medicine

Mr Hough *Q* —The dose you say is three to five drops of the specific tincture? *A* —Yes, sir

Q —How does that compare in amount with the amount of viburnum prunifolium in the hypothetical medicine, which was asked about? *A* —It would be much stronger

Q —Which would be much stronger? *A* —The specific tincture

Q —How much stronger? *A* —Well, I would say it would be a great deal stronger

Q —It is just about the same, isn't it? *A* —No, sir, I think not

The witness has not used carduus marianus Most of the medicines which he uses contain alcohol They run from 40 *per cent* up

Q —Now, is the reason that the alcohol that is in the medicine which you use—does not have a bad effect—I say, is the reason that that amount of alcohol is thoroughly oxidized in the system? *A* —No, there is a difference in the preparation of the medicines to begin with

Q —You mean in the percentages of alcohol? *A* —In the percentages of alcohol

Q —Let us take the largest amount which is in any medicine you use? *A* —You take the *specific remedies* as made by Lloyd, and it takes all the percentage of alcohol to extract the virtue of those drugs You take viburnum prunifolium, for instance out of the green bark of the black haw, which is the viburnum prunifolium, it takes 46 per cent to extract all of the virtue of the drug, by that amount of alcohol Twenty per cent of alcohol will not extract it Consequently you are getting more alcohol than you are getting drug

Q —You mean out of the green— *A* —Out of the green bark, and the dry bark has less I think of virtue The dry bark you can buy for 12 cents a pound, and the green bark you pay $1 50 a pound for Lloyd pays $1 50 a pound for every pound of viburnum *he makes*

Q —You mean then, that if a large amount of alcohol *is necessary* to extract the virtues of any herb or drug, that that amount *of alcohol* is not dangerous, provided it is the amount which is necessary to extract the *properties* of the drug? *A* —Provided this is the amount and you use it in the dilution we use it We are not giving this in teaspoonful—

Q —Now take—

Mr T J Scofield —I insist that the witness finish his answer

The Witness —I say, we are not giving this in *teaspoonful* doses of the tincture We are giving the dilution, *which is a very* marked difference If you put a teaspoonful of that tincture in four ounces of water and give a teaspoonful of that, you are getting a very small amount of alcohol, and that alcohol is diluted

Mr Hough *Q* —What is the largest amount *of alcohol* in any drug which you administer yourself? *A* —I do not know the largest amount

Q —What is the largest *amount that you* recollect? *A* —I am not sure, I believe in strophanthus the alcohol is possibly 70 per cent I am not sure

Q —What is the dose? *A* —From *half a teaspoonful to* a teaspoon, to four ounces of water Usually a smaller dose

Q —How frequently? *A* —Generally a smaller dose

Q —How frequently? *A* —Every three or four hours

Q —What is the largest amount of alcohol, measured in *drops*, we will say, which an individual who is taking *medicine* can safely take into the stomach without getting a *deleterious* effect from the alcohol alone? *I am talking now* about one dose *A* —I do not know

Q —Could they take as much as 48 drops of alcohol *diluted* with five times that amount of water, at one dose, without having any deleterious effect from that one dose? *A* —*They* might

Q —And if it had no deleterious effect, there would be no cumulative effect whatever, would there? *A* —From the one dose, *no*

Q —No Then, if they took it three times a day, there would be no *cumulative effect*? *A* —Possibly not—and only took it for one day

Q—Well, if taken through the three to five days of the monthly period it would not have any effect would it? *A*—It is not ever given that long It generally relieves the first day, if it relieves at all

Q—How long is it usually given? *A*—From eight to ten hours the first day, and generally relieves the trouble

Q—Well if it were given through a period of three days it would have no different effect than if it were given through a period of one day? *A*—Possibly not

Q—Isn t it a fact that the specific medicine, black haw or viburnum prunifolium exercises a direct influence over the sympathetic nervous system, preventing reflex irritation especially of the stomach and heart?

Mr T J Scofield—Wait, Doctor that is objected to That is not cross-examination, and if they simply want to test the Doctor s ability—

Mr Hough—It certainly is

Mr T J Scofield—They have gone far enough

Mr Hough—I am talking about viburnum prunifolium

Mr T J Scofield—We are not talking about a specific medicine here

The Court—You may ask him what he gives it for

Mr Hough—I am asking what he knows about the virtues of viburnum prunifolium

The Court—Ask him if he gives it for these various disorders

Mr Hough—It does not make any difference whether he gives it or not if he knows He may know a great deal about a great many medicines that he don't use

The Court—Ask him if he knows whether or not it is used for that purpose.

To which ruling of the Court the plaintiff etc., excepted

Mr Hough—Is it used for that purpose?

Mr T J Scofield—That is objected to

The Court—He may answer

To which ruling of the Court the defendants etc. excepted

Mr T J Scofield—It is not the medicine involved here and it is not material whether some other medicine is given for the same condition or not. We are not investigating that

Mr Walker—He is talking about viburnum prunifolium

Mr T J Scofield—No, he is not He is talking about a different preparation

Mr Hough—I am asking about viburnum prunifolium Is that not true?

A—Acts upon the sympathetic in heart troubles? Is that your question?

Q—On the sympathetic nervous system preventing reflex irritation especially of the stomach and heart? *A*—I have had no experience in that line.

Q—Is it not indicated for that? *A*—It seems to be on the bottle I do not know I never have used it for that purpose

Q—Is it not indicated to correct morning sickness and palpitation during pregnancy? *A*—Some use it for that.

Q—Is it not used to prepare a patient for labor and facilitate a safe uncomplicated and normal labor and especially to prevent post partum hemorrhage? *A*—Some may use it for that.

Q—Is it not used in threatened abortion in dram doses every half hour or so? *A*—No sir not dram doses of the remedy and there are only certain conditions of abortion where it would be. We do not use as a school or as physicians we do not use any one remedy for diseased conditions. For instance abortion there are a number of remedies that could be used for abortion and we use them in special conditions for abortion not all cases of abortion. We claim that there is no one remedy that will cure—that will affect all conditions of any one disease.

Q—You said this is what you used didn t you (referring to contents of bottle heretofore handed to witness)? *A*—Viburnum prunifolium

Q—Now I will ask that you read here what is on that label.

Mr T J Scofield—I object to that, if the Court please

The Court—What is the purpose of this?

Mr Hough—To show—

The Court—This witness has told you what he does Now he says he does use it for certain conditions tending to produce abortion He says he never uses any medicine to correct all the conditions that would produce abortion, any one medicine. Now that was the answer, a perfectly straightforward answer

Mr Hough—As far as it went, it is a perfectly straightforward answer and satisfactory But we are not limited in asking this witness about a certain medicine to things that he has used it for if he knows something about the medicine

The Court—Exactly but what has this bottle to do with it.

Mr Hough—Because he says that what that bottle says is true.

The Witness—Oh no

The Court—No he has not testified to that.

Mr Hough—Do you say that any statement that is on that bottle is not true?

Mr T J Scofield—That is objected to

The Court—Objection sustained He may read that, and then if he relies upon what it says there, and says that it is true, that settles that proposition

To which ruling of the Court the plaintiff, etc. excepted

Mr Hough—Well then, read that and state if you rely on anything that is on there?

The Court—Ask him if he agrees with it

Mr Hough—If you agree with anything that is on there

Mr T J Scofield—There is another reason why I object to that.

The Court—It is just like a book, and I have ruled against quoting from the book

Mr T J Scofield—Excepting that this preparation is not the viburnum prunifolium concerning which the doctor has been inquired of and concerning which Mr Patten testified here that he used

Mr Hough—We will connect that up at another time, and in a different way We are entitled to ask about viburnum prunifolium

Mr T J Scofield—You will certainly not contradict what Mr Patten said about it because Mr Patten told you that he used the viburnum prunifolium from the bark of the limb That is not this preparation

Mr Hough—That has nothing to do with the question at all That is neither here nor there

Mr T J Scofield—Yes, it is right here

Mr Hough *Q*—Will you state that you disagree with the statements on the bottle which you say contains the preparation which you used

Mr T J Scofield—That is objected to

The Court—Objection sustained in that form

To which ruling of the Court the plaintiff etc. excepted

The Court—You might just as well hand him Mr Ellingwood s book and say Mr Witness please be good enough to read that book through and tell me whether you agree with it.'

Mr Hough—If he had told me first that he studied Ellingwood s book and agreed with some of it, and disagreed with the other— I am entitled—

The Court—Has he told you that he agrees with everything on the bottle?

Mr Hough—He has told me that that is the medicine which he uses

The Court—Yes

Mr Hough—And now I am asking him to tell me the conditions for which that medicine is indicated on the bottle, that he disagrees with

The Court—No, you may ask him what conditions mentioned on the bottle he has used it for

To which ruling of the Court the plaintiff etc. excepted

Mr Hough—Or whether he believes in it, or whether he knows it to be a fact

The Court—Supposing he says that he does not believe in it—

Mr Hough—Then that ends it as to that

The Court—Then you cannot put on a witness to prove that this man did believe it.

Mr Hough—If he says that there is something on the bottle that he don t believe in that ends it But if he says he agrees with what is on the bottle—

The Court—Well read it over and see what you agree with I will save the point on that. Mr Patten's testimony however as to viburnum prunifolium, is as Mr Scofield stated it

Mr T J Scofield—Exactly

Mr Hough—Some people use the dry bark, and some use the green Some use the bark from the root, and some the bark from the tree and the pharmacopeias have been changing as to that.

Mr T J Scofield—What does the Chattanooga Medicine Company use?

The Court—If you won t give me a chance to talk now and then we will never get through The difficulty with your position in this case is that it is Wine of Cardui that is under examination and we are interested in what is in that, and what character of viburnum prunifolium is in that Now if that is one kind and this preparation of Lloyd s—this tincture of Lloyd s is another kind—

Mr Hough—That is another matter again your Honor That is not another kind

THE COURT —We will go into that later

Mr Hough —I say I will connect that up later

THE COURT —That is different from what Mr Patten said

Mr Hough —Both come from the same shrub or tree

THE COURT —Just read it over and tell us what you accept and agree with

To which ruling of the Court the defendants, etc , excepted

A —Well, I agree with it in some phases, not all of it

THE COURT —Well, tell us the things that you do agree with *A* —The latter statement, uterine disorders, inducing hysteria, hysterical delusions and petit mal shall be treated with the remedy, if they are due to spasmodic conditions or irritation or nervous conditions

Mr Hough *Q* —You mean to say that that is the only statement on that with which you agree? *A* —That is what I use it for

Q —I asked you whether you agreed with the statements there and asked for you to state which ones you do agree with *A* —I agree with that, that where it is used for that condition, threatened or painful dysmenorrhea, painful affections of the uterus, that occur as a result of nervous irritation, as an antispasmodic, I use it in that condition

Q —You mean then, that you disagree with all the other statements on there?

Mr T J Scofield —That is objected to

Mr Hough —We are entitled to have the witness' attitude correctly defined

THE COURT —He says that is what he agrees with

Mr Hough —I can agree with ten things, and I can say that I agree with Number 1 That don't mean that I disagree with the other nine

THE COURT —If he says he knows nothing about the other nine—

Mr Hough —If he says he knows nothing about the other nine, or says he disagrees with the other nine, then his attitude is clearly defined

Q —Do you agree or disagree with all the rest? *A* —No, sir, I do not know the effect of it on all the rest

Q —How many of the other statements do you agree with?

Mr T J Scofield —That is objected to

Mr Hough —That is perfectly competent

THE COURT —He has told you all he agreed with

Mr Loesch —That is it

Mr Hough —He has told us what he used it for He has not said—

The Witness —I agree with the statement, that it is an antispasmodic for neuralgic conditions in the female, resulting in expulsive pains

Q —Are there any other statements there with which you agree? *A* —No

Mr Hough —Well, that defines it

Mr Hough *Q* —Doctor, you say that Lloyd's Specific Medicine, called viburnum prunifolium, is made out of the green bark? *A* —Out of the green bark

Q —How do you know that? *A* —He told me so

Q —He told you so? *A* —Yes, sir

Q —It is not in any of his literature, is it? *A* —I do not know

Q —Well, you only know from what he told you? *A* —I know that he makes—that there is a marked difference between the virtues of a dried drug and a green drug—

Q —A very marked difference? *A* —I know that Professor Lloyd—that the dried bark, which is practically worthless, he said, can be bought for 12 cents a pound, and the green bark at a dollar and a half a pound, so that there must be a difference, a good deal of difference in the virtue of them

Q —Well, you don't know how it was made, except what he told you? *A* —That is all I know

Mr Hough —I ask that his testimony on that point be stricken out

THE COURT —Well, that would mean to strike out then all of his testimony on viburnum prunifolium

Mr Scofield —They called that out

Mr Hough —I did not call it out, whether it was green or dried

Q —Now, is it not a matter of fact that in the book which they publish, they say that in some cases the green bark is employed, and in other cases the dry bark is employed, and again a bark that is partly dried, and in a few cases a drug is better for age—

Mr Scofield —I object to that—

Mr Hough —and that no rule of thumb is possible in plant pharmacy—

The Witness —Yes

Mr Scofield —I object to the question

THE COURT —Objection sustained

To which ruling of the Court the plaintiff, etc., excepted

Mr Hough *Q* — Well, independent of what Professor Lloyd says about it, don't you know that to be a fact?

Mr T J Scofield —I object to that as immaterial and not cross-examination

Mr Walker —In view of what he just said

Mr Scofield —That is referring to all other drugs We are not interested in other drugs

THE COURT —This man does not pretend to be a druggist

Mr Hough —He has undertaken to inject, when it was not asked for by any question of mine, the statement to the jury that Lloyd used the green bark, and we used a dried bark, and therefore the dried bark was of no account, when, as a matter of fact, he knows nothing about what Lloyd used, except what he says Lloyd told him, and Lloyd's own statements are published and are contradictory of what he says Lloyd told him

The Witness —No, sir—

Mr Scofield —No I object to that statement Lloyd's publications do not contradict what he said

THE COURT —What you read does not contradict it, as to viburnum prunifolium

Mr T J Scofield —No

Mr Hough *Q* —Don't you know that to be a fact—

Mr T J Scofield —I object to that

Mr Hough —That Lloyd—

Mr T J Scofield —Go ahead and ask the question

Mr Hough *Q* —Don't you know it to be a fact that Lloyd's Specifics are sometimes made out of green barks, and sometimes out of dried barks, and sometimes out of partially dried?

Mr Scofield —I object to the question, if the Court please

THE COURT —He may answer that, if he knows

Mr Scofield —I object to it, unless he asks in regard to viburnum, if the Court please Lloyd's Specific is a name that is applied to a very great many different medicines

THE COURT —I am letting him answer because the answer is perfectly harmless, it has nothing to do with this case—a general answer like that

To which ruling of the Court the defendants, etc , excepted.

Mr Hough *Q* —Do you know that that is a fact? *A* —Repeat your question, please

Q —That in many instances dried bark is used, in many instances, and green bark in many instances, and in many instances the partially dried bark? *A* —Yes, sir

Q —And that there is no rule of thumb applicable to that question in plant pharmacy—

The Witness —Yes, but—

THE COURT —In general, there is no rule that will cover all drugs?

The Witness —No rule that will cover all the drugs—certainly not.

Mr Hough *Q* —Now, is it not a fact that the bark of the root, stem and branches of the black haw are medicinal, so the root is preferred by eclectics? *A* —I presume there is virtue in all parts of it, I don't know

Q —Now, is it not a fact that three drops of the Specific Tincture represents three grains of the drug? *A* —Practically, yes

Q —And the dose is from three to five drops of the tincture, is it not? *A* —Yes, diluted, yes, sir

Q —Now, the—is it not a fact that water, or alcohol, extracts the properties of the viburnum prunifolium? *A* —No, sir, water will not extract it

Mr Hough —Now, he has stated that this King's American Dispensary is an authority, and I ask to read the statement of Mr King

Mr Scofield —No, he has not said it was an authority

THE COURT —He did not state that he relied upon it

Mr Hough *Q* —Didn't you say you regarded that as an authority in your school? *A* —No, sir, I did not make that statement

Mr Hough *Q* —Wasn't it, by resolution—

THE COURT —Now, Mr Hough, you may save the point, I don't want you to read this before the jury, because you are getting in indirectly before the jury things that I am unwilling to let you put in directly When you read that resolution—it is very easy to get things into the mind of the jury, and very difficult to get them out

Mr Hough —I was not going to get anything into the minds of the jury—I did not want to get anything into the minds of the jury, I was just going to ask this witness if his school did not adopt this

THE COURT —Suppose the school had?

Mr Hough —And you mean he discards it?

THE COURT —No—he may or may not He says now that he does not rely on it

Mr Hough *Q* —You don't regard it as an authority on this point? *A* —Not now Many things have changed, and that has been out ten or fifteen years That was written years ago Much has been changed

Q —Was there ever a time when water would extract the properties of viburnum prunifolium? *A* —Not all of the properties

Q —Is it not a fact that the leaves of the black haw have been used for tea, made with water only? *A* —I don't know

Q—Isn t that the way it originally started, as a home remedy? A—am sure I don t know

Q—Well, upon what do you base the statement that the properties are extracted only with higher per cent of alcohol than 20 per cent? A—By talking with Professor Lloyd, who has made a study of these plants and the method of extracting the virtues of them, for fifty or sixty years—fifty years I presume

Q—And that is all you know about it? A—Yes, sir, I am not a pharmacist myself

Q—Then as a matter of fact you don t know whether less than 46 per cent. would extract all the properties or not, do you? A—Not personally

Q—When did you talk with Professor Lloyd on the subject? A—Last week.

Q—Last week? A—Yes sir

Q—That is after you knew you were coming up to testify? A—Yes sir

Q—And you talked with him in order to enable you to testify in the case? A—In order to know the amount of alcohol that was in—yes sir

Q—That is a different proposition the amount of alcohol that is in his medicines is stated on the bottle 46 per cent Do you mean to say that Professor Lloyd told you that nothing less than 46 per cent would extract the virtue? A—He stated that they used the smallest amount of alcohol possible to extract the virtues, and maintain it—preserve it—the smallest amount possible in the Specific Tinctures were used to extract the virtues of the root and preserve it

Q—Don t you know as a matter of fact, that the method—that the process of manufacture for their medicines is secret, and nobody but them knows how it is done? A—To some extent

Q—And all you do is buy these bottles in a drug store or write your prescription for them? A—No, sir I know that these Specific Tinctures possess a virtue that many of the remedies under the same name do not possess because they are made differently

Q—I say don t you as a matter of fact— A—Many of them are inert when they are not prepared in that way

Q—You stated that the cnicus benedictus contained 74 per cent alcohol didn t you? A—No sir

Q—Did you say that you knew what it contained? A—No

Q—Did you say you had never seen it? A—No sir

Q—Can you identify this as a bottle of Lloyd s Cnicus Benedictus?

Mr T J Scofield—I object to that, if the Court please That is the same sort of purpose that he is following through this case in reading from the book—

The Court—The objection is sustained because how can he know? The label may say it does, he knows nothing except what he sees on the bottle.

To which ruling of the Court the plaintiff etc. excepted

The witness testified that he could not identify the bottle The witness does not believe that anyone but a physician can buy Lloyd's specific in a drug store The witness knows of Dr J William Fyfe. He has read to some extent Fyfe's book on "Modern Materia Medica and Therapeutics" He has not had the book in mind in giving his testimony It is not a fact that in order to get the most beneficial influence from viburnum prunifolium in cases of threatened abortion, small doses must be given after conception until the fifth month of pregnancy unless certain conditions call for it There might be conditions in which such treatment might be of value.

The amount of the alcohol in the medicine is dangerous in gonorrheal inflammation depending on the quantity of alcohol given The witness does not believe that there is any difference in giving the patient 96 drops of whisky or in giving 48 drops of alcohol in five times that amount of water There might be a difference in the physiologic effect of the two mixtures

The witness then stated that practically all the tonics used by the eclectic school are made up with alcohol Alcohol could not be deleterious in the dosage given.

The witness does not know the amount of alcohol that a person can freely oxidize in the system In the treatment of gonorrhea, the witness does not use drugs in combination with alcohol He uses local treatment. When he uses general treatment, he uses it for general symptoms

The witness stated that only a small percentage of girls need treatment during puberty

He has been called in cases of puberty to give medicine which he gave to correct the conditions which were responsible for the absence of the menstruation. He has given nux vomica, 5 drops to 4 ounces of water three or four times a day, usually only continued for a day He has also given pulsatilla and gelsemium and other specific tinctures

The witness stated that when women have trouble during menstruation they think of taking medicine For hot flashes, he gives pulsatilla, if there is headache, he might give gelsemium, the treatment might be continued for a longer or shorter period of time

The witness has not given alcohol in diabetes and he considers that opinion is divided as to its use as a food The witness stated that the words "female complaints" might include leukorrhea or any of the conditions last mentioned and associated with the female generative organs

All cases of malpositions of the uterus produce uncomfortable symptoms or are accompanied by inflammation Dr Thomas has given drugs during pregnancy to treat constipation for nervous disturbances, etc. Not all of them are given any alcohol

Q—Now when a woman has had a miscarriage previously, and fears a miscarriage at the next conception, what medicine or what treatment do you give them? A—That would depend altogether on her general health If her general health was good I don t know that I would give her any medicine. If her general health was good, I would simply tell her to keep quiet as she approached that time—if she needed any medicine, she would have it If there was any special call for medicine she would have it.

Q—As she approached what time? A—As she—if she had had a miscarriage several times and she was pregnant again, when she approached that time she had it—

Q—That is, the disposition is to miscarry at the same time the tendency is— A—Often it is, yes—the tendency is that, after a few miscarriages

Q—Now suppose her condition was a little run? A—She might have tonics to sharpen the appetite.

Q—How soon would you commence it? A—Whenever that condition was present, whenever she began to complain that her bowels were not moving or her kidneys were not working or the digestion was not good That would precede and accompany the run down condition, and she would be treated for those conditions

During pregnancy he would give natural tonics, fresh air or exercise and medicinal tonics if they were needed The tonics contain alcohol

REDIRECT EXAMINATION BY MR T J SCOFIELD

The witness testified that in each dose of the tonic given there would be about one-tenth of a drop of alcohol

Adjournment was taken until 2 o'clock the same day

May 8, 1916, Afternoon

TESTIMONY OF DR. R. L. THOMAS (*continued*)

The court met pursuant to adjournment

RECROSS-EXAMINATION BY MR. HOUGH

Dr R L. Thomas stated that the largest percentage of alcohol in any medicine which he has ever used would be a dram in 4 ounces, about one-sixth of a drop at a dose He does not prescribe whisky or brandy, and has not prescribed any gin in twenty-five years

TESTIMONY OF MR. J E. KEETON

Mr J E. Keeton was called as a witness for the defendants

DIRECT EXAMINATION BY MR. WALDO

Mr J E. Keeton testified that he is sheriff in Calbert County Alabama He resides in Tuscumbia He has had experience with Wine of Cardui

Q—Now take your own time and in your own way and in your own language state to the court and jury what that experience has been A—Well I had an experience with my wife. I gave it—my wife was taking Wine of Cardui for six years

Q—For six years? A—Yes sir and she had taken it for whites and falling of the womb and irregular monthly periods and she had taken it, she first began to take it about six years ago probably a little more or a little more or a little less than six years ago but right around six years ago she began to take it in doses—from you know a tablespoonful from one to four times a day and she got to increasing the doses on and on and—well she increased the dose and about four years ago we had a miscarriage in our family and she grew worse all the time after that and she then increased the dose until she was taking something like half a tableglassful something like one half of a table glass you know

Mr Keeton stated that his wife had been taking Wine of Cardui before the miscarriage occurred. She had been taking it between four and six *months* After the miscarriage she discontinued for a couple of months and then began taking it again The wife of Mr Keeton is now dead During

ing her illness she saw Dr Greer and Dr Palmer She was not at any time operated on Mr Keeton's wife took between 50 and 100 bottles of Wine of Cardui during six years The witness was asked how his wife happened to begin taking Wine of Cardui

A—Well, she began to read the Ladies' Birthday Almanacs—and besides other older women told her and me both, that was the reason she began taking it.

Mr Walker—I move to strike that out

The Court—Strike out the matter of the advice from older women You saw her read the almanacs? *A*—Yes, sir

Q—And the literature of the Chattanooga Medicine Company? *A*—Yes, sir

Mr Waldo *Q*—How long ago was that, Mr Keeton?

Mr Walker—Your Honor, my objection particularly went to the reading of the literature

The Court—We will strike out of the record the witness' conclusion, that that is why she began The fact that she read the literature of the plaintiff company may stand

Mr Walker—Yes, and the fact that she talked with older women, which is his conclusion as to the reason why, that it was the result of that

The Court—That is stricken out

Mr Walker—And the other stands, I take it?

The Court—Yes

Mr Walker—All right

Mr Waldo *Q*—Do you say that you and your wife read the Ladies' Birthday Almanac together? *A*—Yes, sir

Q—How long after that reading did she begin the taking of Wine of Cardui? *A*—Oh, I could not say, right after that.

Q—Did she take it continuously from that time on, or only at periods? *A*—Off and on, you know She did not take it regularly, just owing to her feelings, you know

Q—Up to within what time of her death did she continue to take Wine of Cardui? *A*—I could not hardly say probably two months

Q—How long has she been dead? *A*—Since the 23d of January

CROSS-EXAMINATION BY MR. WALKER

On cross-examination Mr Keeton stated that he and his wife read the Ladies' Birthday Almanac almost every year He knew of two women with whom his wife talked who advised her to take Wine of Cardui He was present when she talked with the women They told her it was good medicine for female troubles Mrs Keeton was 38 years old when she died and 19 when she married She had been suffering for almost a year before she began to take Wine of Cardui This was between five or six years ago She first began complaining of female trouble when 25 and would have a doctor when she needed him Drs Palmer and Greer were their family physicians and attended Mrs Keeton just before her death Mrs Keeton would not have trouble at every menstrual period The Wine of Cardui was purchased from Drisdoll's drug store in Tuscumbia Some was bought from the Palace drug store The witness bought Wine of Cardui in six bottle lots He does not know how long it would last. The last time he purchased it before his wife's death was in October He bought either two or three bottles He does not know how many were left after she died The duration of his wife's last illness was six months Her trouble was cancer of the womb This last answer was brought out after a statement by the Court to the effect that he wished to correct the ruling made on direct examination, namely a man is entitled to tell as a matter of family history what the matter with his wife was and he may tell how long her last illness was and what she died of

REDIRECT EXAMINATION BY MR WALDO

Mr Waldo asked the witness for what condition Mrs Keeton saw Drs Palmer and Greer Objection was made to the question and sustained

TESTIMONY OF DR WILLIAM HENRY GREER

Dr Greer was called as witness for the defendants

DIRECT EXAMINATION BY MR. WALDO

Dr Greer testified that he resides in New Decatur, Ala He has been practicing medicine sixteen years He graduated from Grant University, Chattanooga, Tenn He has been practicing medicine in Alabama all the time since he graduated with the exception of one year in Oklahoma

The witness had had experience with Wine of Cardui in his practice The first case was a girl, Miss A I, 15 years old 'She was suffering from amenorrhea and had been taking Wine of Cardui for two years without relief She was suffering intense pain in the abdomen and had ecchymotic spots all over her body She had convulsions He found atresia of the vagina and made an opening into the womb and relieved her temporarily until she could be taken to the hospital and operated on, and on opening the abdomen the uterus was found enlarged and filled with blood One tube and ovary were removed and the patient made a good recovery

THE CASE OF MRS KEETON

The next case was that of Mrs Keeton, wife of the previous witness

A—I saw Mrs Keeton off and on for the last six years, that is to say, I would be called into the family, to see some other member of the family—other members of the family

Mr Loesch—The witness is suffering from a throat affection

The Witness—I am sorry to put you to all this trouble. I will say that it is about two years and a half ago Mrs Keeton called my attention to her menstrual disturbances and I told her, I said, "Well,' I said, 'Probably you had better come to the office or I will examine you here at home and we will see what this trouble is" She said she had been troubled for several years She said, "Well," she said, "The boy is sick now, and we will wait. I am taking Wine of Cardui, and I will see what it does for me" Well, I did not press the matter

At other times she mentioned it to me, probably at some neighbor's house, or something was said and she was coming to have a treatment She did not do it.

About eight months ago they called me to the home and I made an examination, an instrumental examination and I found a cancer of the cervix, probably the beginning of a cancer of the cervix, and I advised an immediate operation She refused and persisted in taking Wine of Cardui Doctor was called in and made an examination, and either went with her or sent her to Memphis, where Dr G M Holder made the same diagnosis and told her that he could not do anything for her It called for an operation That was probably five or six weeks after I saw her She returned to her home, and I went from Decatur down there several times to see her and she died in January of carcinoma of the uterus

Mr Waldo—That is—carcinoma of the uterus?

The Court—I cannot understand whether there was an operation performed

The Witness—No, sir, nobody would touch it.

Mr Waldo *Q*—Why wasn't there an operation performed? *A*—Well, she seemed to have faith in this medicine, that she was taking

Mr Walker—I move to strike that out

The Court—Strike it out

To which ruling of the Court the defendants, etc, excepted

Mr Waldo *Q*—I mean this, Doctor— *A*—I answered that question previously that it was at an operable stage, before

The next case was that of Mrs J E W, who said she had taken considerable Wine of Cardui She had two or three miscarriages and he did curettement after each miscarriage

The daughter of Mrs J E W—— developed chorea When she consulted the doctor he advised her to quit taking Wine of Cardui, gave her tonics, advised rest in bed, gave her a diet and laxatives and she became well

Q—Now, have you another case, Doctor, that you remember of? *A*—I have plenty of cases, but the next one I would give you is Mrs W—— G—— I have her word for it, I have this as part of the clinical history of the case She came to me after she had had an operation in Birmingham She was very nervous and very much run down and she was suffering considerable pain in the abdomen

From my examination I found that her abdominal contents were sagging very low and I inquired—she looked like an alcoholic and she said, "Yes," she says, "I drink some whisky" I found that she had been a sufferer for many years She was a widow at that time and after she had married her husband had had her operated on She said that she had had this female trouble a long time She took this Wine of Cardui and took some whisky with it

Mr Walker—Took some whisky along with it? *A*—Yes, I considered her an alcoholic case probably brought on from—

Mr Walker—That is objected to

The Witness—From the use of this medicine

Mr Walker—I move that that be stricken out

Mr Waldo—Just state what you know of the case, from your own experience with the case

Mr Walker—That is out then?

The Witness—Well, from the history, from the history she gave and from my observation, I considered it such a case

Mr Waldo *Q*—How long had she been taking Wine of Cardui? *A*—I could not tell you.

Q—She did not say? *A*—No, sir

Q—What became of her, doctor? *A*—Well, I had—I put her on some tonic and put an abdominal supporter or binder, a strong binder on her and rested her up in bed about a month, and she improved I do not know to what extent But she improved materially She quit her habit.

Q—Is that all the experience you have had with Wine of Cardui in your practice? *A*—No, sir that is not all the experience I have had

Q—Do you care to tell any other experience? *A*—Well, I do not think it would be necessary

CROSS-EXAMINATION BY MR WALKER

On cross-examination, the witness gave in detail the names and residences of the patients mentioned on direct examination He described in detail the various points mentioned in the direct examination

In the case of Mrs G——, to whom he gave tonics, he gave strychnin arsenic, hypophosphites and phosferrol The witness testified that he came to Chicago about April 22, stayed three days and went home, stayed home three or four days and then came back to Chicago He first saw Mr Keeton in Chicago on May 7 He, himself, spoke to Mr Keeton about testifying for the American Medical Association The witness belongs to his county and state societies and to the American Medical Association He has had The Journal ever since he graduated He read the articles on Wine of Cardui He received a letter from Dr Perry, secretary of the state association He first met Dr Heizer about two years ago in Sheffield, Ala He had not received any communication from the American Medical Association asking him to help defend this suit

Q—When did you first know that the American Medical Association had been sued as a result of the articles that they published against Wine of Cardui? *A*—When I realized it fully was when Miss Ervine came to my office asking—

Mr Walker—I am just asking you for a date

Mr Waldo—Let the witness answer

Mr Loesch—He has a perfect right—

Mr Walker—I called for a time I asked him when and he started to tell me

Mr Loesch—He started to fix the time by your woman detective coming around

Mr Walker—Oh, now here here

The Court—When calls for a date

Mr Walker—Yes It don t call for anything else

Mr Waldo—If that is the only way he can fix the date I think he has a right to say it

Mr Walker—If he cannot tell the date he can tell me so (Addressing Mr Waldo), Pardon me for being in front of you

Mr Waldo—Excuse me for being behind you

Mr Walker—Oh that is all right that is where I like to have you What I would like to ask you Mr Juror—or Mr Witness—is for the date *A*—I could not give you any date

REDIRECT EXAMINATION BY MR WALDO

Q—From whom did you first learn—I withdraw that By whom were you first approached to become a witness in this ca e?

Mr Walker—That is objected to

The Court—He may answer

To which ruling of the Court the plaintiff etc excepted

A—Well—

The Court—That calls for somebody s name *A*—Now I modify my answer in the way—

Mr Walker—You see approached to become a witness.

Mr Waldo—In this case

Mr Walker—That calls for something that somebody said to him It assumes from their own witness that he was approached by somebody to become a witness

The Court—You brought that out in a way in your question about Mr Heizer "When did you first hear about this case?'

Mr Walker—And that is on cross-examination

Mr Loesch—Why—

Mr Walker—I have a right to assume on cross-examination but I do not understand that they have, with their own witness

Mr Waldo—They brought out the fact that their own emissary had been down to see this witness before he had seen Mr Heizer

The Court—What difference does it make gentlemen?

(Witness excused)

TESTIMONY OF DR. EDMUND WEARING SIMMONS

Dr Edmund Wearing Simmons was called as a witness for the defendants

DIRECT EXAMINATION BY MR WALDO

Dr E W Simmons testified that he is a physician practicing in Summerville, S C., and a graduate of the Medical College of South Carolina and has been in practice eleven or twelve years He has had some experience with Wine of Cardui

Mr Waldo *Q*—Doctor will kindly state to the jury what that experience has been? *A*—Well the first case I was called to see a woman who was supposed to have taken morphin She was about six miles from Summerville and when I got there I found on examination that the woman was practically under the influence of alcohol acute alcoholism I then administered a hypodermic of apomorphin and caused her to vomit and when I did so her husband, who was very much worried before, said Just a common drunk

Mr Loesch—We will have to withdraw the witness if he cannot do better than that

Mr Walker—I think it is more dialect than the voice

Mr Waldo—We have no dialect in the South, sir

Mr Walker—Well, it is something very much like it

The Court—Talk louder and slower so that everybody will be able to hear you

Mr Walker—I think he is talking French

Mr Waldo—Go ahead, and try to enunciate distinctly *A*—He simply said plain drunk and went out of the room I inquired what she had taken and I found she had not any whisky there but there was a bottle on a shelf near the bed it was a bottle of Wine of Cardui I asked her if she had been taking it after about an hour and a half or so—if she had been taking this

Mr Walker—That is objected to

Mr Waldo—He says that it was an hour or two afterwards that he asked her

The Witness—I asked her what she had taken and she said she had taken this about two thirds of the bottle—about two thirds of the bottle had been used

Q—Two thirds of the bottle? *A*—Two thirds was empty and one third was in the bottle One third was in the bottle on a shelf near the bed

Q—Of what? *A*—Wine of Cardui

Q—Go ahead *A*—I asked her if she had been taking that all the time and she said she had been taking it for—about six months and in regard to this she said that the usual dose was about a tablespoonful but she had gradually taken it in larger amounts just from the bottle no particular amounts and that she had taken that probably that same day *two thirds of the bottle within a few hours probably*

Mr Walker—He says that she probably had taken it—

The Court—Strike out the probabilities Mr Reporter Did she tell you on that occasion how much she had taken? *A*—No she did not sir

Mr Waldo *Q*—Didn t tell you how much she had taken out of that bottle? *A*—No sir Only what I saw in that bottle—just taken that day

Q—She told you she had taken all except what was in the bottle that day? *A*—Practically, yes

Q—What became of that woman? *A*—That was the last I saw of her She was just a transient when I saw her and I have not seen anything further of her

Q—Have you had any other experience? *A*—The case of a child about thirteen years old a case of amenorrhea I was called to see her and she was suffering from cramps She had had a certain period but she never had menstruated they never had appeared That was a case practically of hookworm She had been taking Wine of Cardui for them and I asked her if she had taken Wine of Cardui and she had at these periods I gave her the hookworm treatment and in the course of a few months the periods were established That is practically all the experience I have had

Q—How long had she been taking Wine of Cardui?

Mr Walker—That is objected to

A—Probably—

The Court—What did she tell you? *A*—Her mother told me about a year a year to eighteen months a year to eighteen months

Mr Waldo *Q*—What became of that patient? *A*—She got all right

Q—Is that the limit of your experience with Wine of Cardui? *A*—Practically the limit yes sir

CROSS-EXAMINATION BY MR WALKER

The witness testified that he commenced practice immediately after graduation He sees practically 50 or 100 cases of menstrual disturbances in women and perhaps one third of these are young girls at puberty

The first case he treated in 1910 The family were transients working temporarily on a farm They live in a little hut There was one child in the family The woman was about 28 or 30 and did not have hookworm so far as he knew The woman was under the influence of alcohol He understood from the woman that she had taken Wine of Cardui that day He saw her about 10 o'clock at night He did not notice that there was a whisky jug in the hut and the patient told him there was none The witness testified in detail concerning the operation of the patient He was then cross-examined in detail concerning the case of the child with amenorrhea

The witness testified that he came to Chicago at the request of Dr Heizer after he received a communication from Dr Hoyne, secretary of the state medical society The witness came to Chicago on April 25 and left the day after Mr Patten's death He returned on Thursday night previous to testifying The witness has heard of Wine of Cardui being used in menstrual disturbances all during his practice

TESTIMONY OF DR J G VANCE

Dr J G Vance was called as a witness for the defendants

DIRECT EXAMINATION BY MR WALDO

Dr Vance testified that he resides in Marvel, Ala He graduated from the Birmingham Medical College in 1905 He practiced two years in Warrior, Ala, and later at Marvel He has had experience with Wine of Cardui in his practice In reciting the history of his cases he referred to notes

His first case was Mrs D H, a white woman, aged 40, suffering from hemorrhages at menstruation periods She had a laceration of the perineum and a prolapse of the womb and she had four living children and had had eight miscarriages She had received medical attention at each miscarriage The patient stated that she had taken some six bottles of Wine of Cardui without relief He saw her in 1914

The Witness —The next is Miss Ira H—— I will give you these names after I get down from the stand White, age 34, pellagra, my diagnosis I was called during the fall of 1913 to see this woman Her mother gave the history of her having a hemorrhage at each menstrual period, her menses staying all the way from ten days to two and three weeks She had been menstruating at this rate between two and three years

I examined her I did not make a digital examination I noticed the redness of her hands and forearm After that I got her history, a history with reference to a sore mouth and upset stomach I made a diagnosis of pellagra, and put her on the treatment accordingly At that time we did not know very much about the diet treatment of pellagra, but I put her on a nourishing diet because I felt that that was the thing to do In addition to that, I put her on the arsenic

This woman made a recovery Today she is not having any hemorrhages at her menstrual period, and since Dr Goldberger's theory came out with reference to diet, of course, I put her on forced diet, and she has improved She is not a well woman, because her financial condition—her mother's financial condition is such that they cannot get nourishing food and a proper diet

Mr Waldo *Q* —Well, doctor, in that case did Wine of Cardui form any part of the clinical history which you got from her? *A* —It did

Q —What part did it form? *A* —Her mother got a bottle for her, and she took three doses, and it made her so dizzy—well as she said, expressed it, it just made her drunk, so her mother told her not to take it.

Now, I will give you another—

Q —Did she take any more, Doctor? Do you know? *A* —Just the three doses She took it all in one day

The next case was Mrs J B——, a white woman, aged 35, he saw in 1914 She complained of pain in the lower part of the abdomen at the time of the menses She had practically the same symptoms as those of her sister, the previous case, although she was better nourished She had taken some three or four bottles of Wine of Cardui consecutively for pain in the abdomen She, like her sister, stated that it stimulated her and made her face feel flushed and made her dizzy She said that she seemed to forget that she had the pain around While he did not make a positive diagnosis, symptoms showed that she had pellagra, and he put her on forced feeding

The next patient was L W——, colored, aged 35, whom he saw in 1915 She suffered with pain in the region of the appendix and ovaries at the menstrual periods On examination he found a mass on the left side and a smaller mass on the right side and he told her that he thought she had a fibroid tumor She went to a hospital and was operated on She gave a history of having taken seventeen bottles of Wine of Cardui without any relief over a period of a year The patient is well today and working in a camp at Marvel, Ala

The next case is M K, colored, aged 36, whom he saw in 1908 She complained of flooding and of pain on both sides during the menstrual period On examination, he was convinced that she had pus tubes and advised operation The patient was operated on in 1912, both tubes and both ovaries being removed She had taken six bottles of Wine of Cardui without relief

The Witness —I asked her if she had taken any medicine, and she said she had taken this Wine of Cardui, six bottles When I asked her if she had taken anything else, she said yes, she took whisky when she could get it, but her husband did not like to have her take whisky, she said, and took this Wine of Cardui, because she got practically the same benefit from taking Wine of Cardui as she did from the whisky This woman, as I said, was operated on in 1912, and she is a well woman today, doing her own work

The next case is Mattie D——, colored, aged 30 I doubted that age, but she gave me that as her age, and I, of course, had to put it down

Mr Waldo *Q* —How old did you think she was? *A* —She looked to me to be about 36 or 38, but you cannot tell much about a nigger's age, I will be frank with you there.

I saw this woman in 1914 She gave me a history of smothering, and especially did she give that history of smothering if she ate anything after four or five o'clock in the afternoon Her food, she said did not seem to sit, and it lay very heavily on her stomach In questioning her with reference to taking medicine, she said that she had taken nothing other than Wine of Cardui, except an occasional bottle of some form of pepsin I believe it is syrup of pepsin—but I am not positive Anyhow, it is bought in any drug store. It is just a laxative with some pepsin in it.

She had taken this Wine of Cardui for a period of eight years, if I am not mistaken—I think I have that down Yes, a period of eight years, and no relief other than a very happy feeling when she would take this Wine of Cardui

She gave a suspicious history of possibly syphilis, so I sent her to St Vincent's Hospital and had a Wassermann reaction made for syphilis, and it was positive, plus 4 She was given intravenous injection of salvarsan with follow up treatment of mercury This woman returned to our place, and she is living there, and from a woman of about 130 pounds, she weighs about 180 pounds at the present time She has no trouble to amount to anything with her digestion at the present time

I do not know whether this would be worth anything or not but the intern at the hospital told me that—

Q —Never mind what the intern told you. *A* —Well, it is all right then

Q —You said you sent her to St. Vincent's Hospital? *A* —St. Vincent's Hospital, Birmingham, Ala

Q —That is over on Red Mountain? *A* —Yes, in Birmingham

The next case was Mrs G R——, white, aged 31, whom the witness saw in 1911 She had flooding at every menstrual period since 1906 She was advised by a wandering herb doctor to take Wine of Cardui, which she took without relief She had taken three and a half bottles over a period of eighteen months

The next case was R W——, colored, aged 35, whom he saw in 1915 From the symptoms, and examination, he diagnosed tuberculosis The patient had taken Wine of Cardui She had read one of the Wine of Cardui books and stated after reading this she thought that she had had everything in there and that the medicine would cure her

The next case was L H——, now dead, whom he saw in 1913, She told him that she had been menstruating for over two weeks and was wasting away He examined her and found a cauliflower-like growth on the mouth of the cervix, and suspected cancer The patient stated that she had taken six bottles of Wine of Cardui She went to the hospital and was operated on A microscopic examination showed cancer The patient lived nine months after she was operated on

The next case is A F——, a negro, aged 41, complaining of pain in the lower part of the abdomen There was distention of the abdomen and cessation of her menses of about three or four months The witness saw her in 1915 On examination he found a growth on the left side, also one on the right The patient was operated on for the removal of a pus tube on one side and a fibroid tumor on the other The patient gave a history of having taken three and one half bottles of Wine of Cardui without relief

The next case was Mrs H B, whom he saw in 1905 She had been confined five or six months previously At the time of confinement she had had fifteen convulsions During pregnancy she had taken Wine of Cardui, as it had been recommended to her to make her pregnancy easier She had taken it three or four months prior to the birth of the child, and she also took some after the birth of the child On examination he found a complete laceration of the perineum She went to Birmingham and was operated on In 1907 she was again confined, although this time she had taken no medicine other than laxatives She had an entirely normal delivery

The next case was a Mrs M H, a sister of this patient whom he saw in 1907

The Witness —Mrs M—— H—— On the morning that I confined Mrs H—— B—— I received a call to the commissary of the

Sibley Brothers Coal Company at Warrior to come there quickly as a woman had fainted in the store When I arrived I found this woman lying on the floor She was unconscious and did not know anything I recognized her, knew where she lived and called a buggy and sent her home.

I left treatment for this woman I recognized her condition as being serious as she was bordering on puerperal convulsions I left her and returned to my home On arrival at my home I had a call from this woman s sister Mrs H—— B—— whose case I have just gave and went there to confinement. While I was at Mrs H—— B——s I got another call to come back to Mrs M—— H—— I could not go and another physician went and confined Mrs. M—— H——

Mrs M—— H—— died I saw her about two hours after her death she was jaundiced very much swollen her feet and legs were swollen her face and hands were swollen she died in convulsions

Mr Waldo Q—Now did Wine of Cardui constitute any part of the clinical history of Mrs M—— H——? *A*—I only know what her sister——

Mr Walker—I object to it

The Court—You were sent for by the sister?

The Witness—No I was sent—

Mr Walker—He found her in the store and she was sent home, and then he went to the sister's house and was sent for from there by Mrs M H——

The Court—Well if he got the information from any member of the family during the time he was treating the patient I would say that he could give that history, but if he received it at some other time why then it must necessarily come within the hearsay rule.

The Witness—Well I received this—your Honor I received this information about two hours after I visited this woman from her sister

The Court—Well, she was still alive?

The Witness—Yes.

The Court—And the information was given you for the purpose of enabling you to treat her?

The Witness—I asked her if she had received any treatment from any one at all and she said—

Mr Walker—I object to that.

The Court—Yes tell just what she said about Wine of Cardui

The Witness—She said she had taken some Wine of Cardui that is all the treatment she had received.

Mr Hough—Well the sister s statement is hearsay She would not be competent to testify

Mr Walker—He never went to treat this woman, he found this woman in a store

Mr T J Scofield—He gave her treatment.

Mr Walker—No no

Mr Hough—It is not competent but let it go

The Court—He never had an opportunity to treat her As a matter of fact the sister saying she had taken the Wine of Cardui not knowing when and what amounts the testimony is negligible anyway It may be stricken out

To which ruling of the Court, the defendants etc. excepted

The next case was that of Mrs J O—— whom he saw in 1908 a confinement case The woman stated that she had had difficulty in carrying the child. She had received no other treatment than the taking of Wine of Cardui He advised operation which she did not have and the last heard of she was still in the same condition.

The next case was H G B a man whom he was called to see in 1908

The Witness—H G B—— His residence was at that time in Birmingham. I was called *in 1908 to see this man* who wanted me to give him something to stimulate him brace him up so that he could go to work. He was a painter under contract painting the houses for the Roden Coal Company at Marvel Ala. at that time It had been several days since he had been at work and he wanted something to brace him up so that he could go back to work.

I asked him what he had been taking and he said he had been taking whisky When he could not get whisky he would take Wine of Cardui.

Mr Walker—I move to strike it out.

Mr Waldo Q—Did you ascertain how much Wine of Cardui he had taken doctor? *A*—I did not.

Mr Walker—Wait a minute. He had not been taking any then He had been taking whisky He had been taking whisky I move to strike it out.

Mr Waldo—We will find out on this particular case. Q—Did he state whether he had been taking Wine of Cardui or whisky? *A*—Well I could not say at that particular period. He told me that he had taken Wine of Cardui but he did not tell me at that period. He said—well at that time, we were supposed to be dry especially in that county

Mr Waldo—What county in Alabama? *A*—Bibb County

Q—Bibb County? *A*—It was pretty hard to get whisky—

Mr Walker—I object to that, unless the man told you, and then it would not be competent.

Mr Waldo Q—Did you see this man at Birmingham? *A*—I have seen him in Birmingham

Q—But on this occasion when he was suffering from— *A*—I saw him at Marvel Bibb County Alabama

Q—Did he state at that time whether part of the spree had consisted of drinking Cardui? *A*—He did not

Mr Walker—That is objected to

Mr Waldo—He said he did not, you ought to be satisfied

Mr Walker—Well, he answered over my objection, and I don't know why that should make me content

The Court—Go ahead please, we are going to stop in a few minutes

The next case was J W G——, whom he saw in 1910

The Witness—Mrs J W G—— I was called to see her in 1910 I cannot say just exactly when in 1910 I saw her but when I reached her I found her rolling and tossing from one side of the bed to the other in a very filthy condition had been spitting on herself and she resembled a woman who had been on a drunk

I could get no history from the woman because she was in such a muddled condition that she could not give any account of herself

On inquiry from her husband as to what she had taken he produced a bottle of Wine of Cardui and he said she had taken that

Mr Walker—I object to that

The Court—This was at the time when you called?

The Witness—At the time your Honor

The Court—Was the bottle empty, or did it have the medicine in it?

The Witness—Just about half—half full

The Court—Very well

To which ruling of the Court the plaintiff etc. excepted

Mr Waldo Q—Is that all of your cases doctor? *A*—One other case

Q—Let us have it. *A*—Mrs M J S—— I saw this woman in 1910

Q—Go ahead Doctor *A*—I saw this woman in 1910 and she was drunk When *I went in the room* she was *standing upon the floor* had a bottle of Wine of Cardui in her hands and just as I went in the door she drank some Wine of Cardui out of the bottle I only saw this woman drink Wine of Cardui this one time I do not know whether she became drunk from drinking this Wine *of* Cardui or not I do know that she had been drunk at different periods during her residence at that place

Q—Did you say you saw her drink the Wine of Cardui out of the bottle? *A*—I did

Q—How *much did she take?* *A*—Well *I really could not say* She —from the time I walked in the door—I walked up to her a distance of about I suppose eight or maybe ten feet she kept the bottle to her lips from the time I walked from the door to her She drank two or three pretty healthy swallows.

Q—You had been called there to treat her professionally? *A*—I was treating her at that time and merely called to see her

Whereupon an adjournment was taken until Tuesday, May 9 1916 at 10 30 o clock a m

May 9, 1916, Morning

TESTIMONY OF DR. J G VANCE (*continued*)

The Court met pursuant to adjournment Dr J G Vance resumed the stand for the defendants

CROSS-EXAMINATION BY MR. HOUGH

In the absence of Mr Walker, cross-examination of Dr Vance was undertaken by Mr Hough

Dr Vance testified that he is a company physician for the Roden Coal Company at Marvel, Ala and is paid by assessments on the employees When he was in Warrior Alabama he was employed by two brick yards and three coal companies He testified that he is a member of the American Medical Association He received a letter from Dr Perry secretary of the state medical society, and also had a letter from Dr Heizer before he saw him

Dr Vance came to Chicago first on the 24th of April He went home when the Court adjourned and returned later When he wrote to the secretary of the state medical society he told of three cases He did this without reference to his records Dr Vance then gave in detail the names and addresses of the patients described in the direct testimony Practically all of his testimony was taken from the records of his cases It was understood that the expenses were to be paid and that he received a per diem but this is not dependent on the number of cases concerning which he testifies

The witness was then questioned in detail concerning the incidents described in the direct testimony He was asked in minute detail concerning the symptoms of the various patients He does not keep a record of all his cases but only of those which are interesting

The witness was then cross-examined in detail concerning each of the patients, as to the time he saw them and the statements made by the patients concerning Wine of Cardui, also the subsequent history of each patient

TESTIMONY OF DR TORALD SOLLMANN

Dr Sollmann was called as a witness for the defendants

DIRECT EXAMINATION BY MR T J SCOFIELD

Dr Sollmann testified that he is a physician He graduated in 1896 at the Western Reserve University, Medical Department, Cleveland, Ohio He is a professor of pharmacology, and materia medica at the Medical Department of Western Reserve University, and also professor of Materia Medica at the Cleveland School of Pharmacy He has taught continuously in the Western Reserve since 1895, the first two years in physiology and afterward in pharmacology

Q—Are you a member of any scientific societies? *A*—Yes, I am a member of the Cleveland Academy of Medicine, Ohio State Medical Society, American Medical Association, American Association of Physicians, the American Pharmaceutical Association, the American Physiological Society, American Biochemical Society, American Society of Pharmacology and Experimental Therapeutics, and the Society for Experimental Biology and Medicine

Q—Since you have been connected with these various societies, have you held any official positions with them, or any of them? *A*—Yes I have been president of the Pharmacological Society, I have been the chairman of the Section of Pharmacology and Therapeutics of the American Medical Association, I am a member of its Council on Pharmacy and Chemistry, and chairman of the Committee on Therapeutic Research of the Council I am a member of the Pharmacopeial Revision Committee, of its executive committee—of its Committee on Scope, and chairman of its Committee on Therapeutics and Pharmacodynamics

Q—Doctor, have you published any original investigations in pharmacology? *A*—Yes From my laboratory there have been published approximately, I should say, about two hundred pieces of scientific work, and in the most—most of those, I either did myself or was in direction of them—directed them

PHARMACOLOGY

Q—Define the term "pharmacology," so that the jury may understand what is meant by it, Doctor—and ourselves as well *A*—Pharmacology deals with and investigates the actions of drugs on living organisms, and that includes portions—involves a knowledge of chemistry, or pharmacy, of physiology and the principles of the treatment of disease—scientific principles of the treatment of disease

Q—You say it involves the *action of drugs on the living organisms* Now, what do you mean by that, living organisms—so that we may understand? *A*—That means anything that has life in it

Q—Yes? *A*—Of course as it is used, it—that is by members of the medical profession, it relates mainly—eventually at least to the effects on man and on the higher animals

Q—Then, if I understand you, that includes both human beings and the higher animals? *A*—Yes, incidentally *also lower animals*, but that is the main thing

Q—Also lower animals? *A*—Yes.

INVESTIGATING A REMEDY

Q—Doctor, you said that pharmacology is concerned in investigating the action of drugs Now, assume that a certain preparation, which we will call Wine of Cardui, is claimed to be a female tonic, and a scientific remedy against various diseases of the female generative organs Will you explain to the jury how the action or value of such a preparation might be determined? *A*—The real investigation *of the action or value* of such a medicine would have to be determined by the ordinary methods of pharmacological science That would include an investigation of the composition of such a remedy—an investigation of its effect upon animals, and a clinical investigation

Q—Now, what would be the clinical investigation—what would the clinical investigation involve? *A*—You say the clinical investigation?

Q—Yes *A*—The clinical investigation would be the determination of its effects *on* patients in hospitals—preferably at least

tion –Now, in order to obtain proper and definite results from such
the right what is it necessary to do to avoid complications and
fibroid tumor q? *A*—Before taking up such an investigation on
She gave a history c to make, as I said, a valuable investigation, one
of Cardui without an it, as I pointed out before, by investigating
patient is well today a of such a drug, and its effect upon animals
een done that it would be desirable to test
The next case is M hall Then, having laid a foundation for its
1908 She compla ed o ceed to make such tests—*having assured*
during the menstrual pe *harm—he could then proceed to make*
vinced that she had pus ld be—especially when they were based
patient was operated on and ation—they would have value
being removed She had a chemical investigation be necessary
Cardui without relief tion? *A*—A chemical investigation, I
he first step, because the first thing

that an investigator would want to know, when he is trying a drug is what he is really dealing with, the sort of a thing that he has in his hand. He can go at his *investigation* with very much better understanding in a case of that kind than if he takes a thing that he has absolutely no idea what it may contain, or what it may not *contain*

Very often, if he knows what is in a *mixture, he* will know the particular direction of his investigation, the direction that his investigation ought to take, instead of having to feel his ways in a thousand different *directions that would* be conceivable—he knows definitely what particular direction he will now have to investigate.

And beyond that still is the fact that the actions of a great number *of drugs, of* course, are at present known If, therefore, the investigation, the investigator is told, or determines by *himself*, that a mixture or preparation contains this or that drug, it will very much simplify his examination, because he will not have to repeat the things which the long history *of medical knowledge* have already determined

In other words, what might take many years, if he knew nothing about the preparation, he could determine in a relatively short time, if he knew primarily what was in it Still more, of course, if he knew exactly what was in it

ACTIVITY OF A HYPOTHETIC PREPARATION

Q—Now, Doctor, assume it to be the fact that the following substances are absent chemically in the preparation known as Wine of Cardui, namely alkaloids, resins, emetics, saponins and emodin cathartics Would this enable you to form an opinion as to the activity of the preparation? *A*—Yes, it would enable me to form a fairly comprehensive opinion as to the *activity of* such a preparation The classes of substances that you name—you have *named most of them* in classes like alkaloids, etc. These classes of substances that you say are excluded comprise the majority of the known active drugs. It would, therefore, be, as far as all these known *drugs belonging to* these various classes are concerned—the preparation would, as far as these are concerned, be inactive For instance, it would definitely exclude the presence of emetic drugs, the presence of cathartic drugs, and it would also exclude the presence of all, or nearly all drugs that act upon the uterus—or are known to act upon the uterus, such, for instance, as ergot and its principles, hydrastis and its principles, pituitary, adrenalin, and opium—the opium derivatives, metals, cathartics which act upon the uterus *indirectly* I *cannot*, at the moment at least, think of any drug that acts upon the uterus, which would not be excluded by this sort of an examination—any drug that acts definitely upon the uterus, that would *not* be excluded by this sort of an examination

Q—Doctor, what is the average dose of iron in the United States Pharmacopeia? *A*—One grain

Q—Now, assume it to be a fact that Wine of Cardui contains six ten thousandths per cent of iron, have you an opinion as to whether this quantity of iron is of any importance medicinally, when Wine of Cardui is given in tablespoonful doses, three or four times a day? *A*—I have an opinion

Q—What is it, Doctor? *A*—The dose—the proportion of iron which you state there, six ten thousandths of a per cent., would mean that in order to obtain the tonic dose of *iron—one grain*—a quantity of two and one half gallons of the preparation would have to be consumed, or, putting it another way, it would *mean* that in a tablespoonful of this preparation, there would be less than 1/600 of one grain, less than 1/600 of the tonic dose of iron Evidently such a small proportion of iron would have absolutely no significance whatever

Q—Doctor, do you know the *ordinary* dose of volatile *oils*? *A*—Three drops

Q—Assume that Wine of Cardui contains four thousandths per cent of volatile principles, other than alcohol and water, can you tell the jury how much Wine of Cardui would have to be used in order to obtain the average dose, namely, three drops of the *volatile oils*? *A*—One and a quarter gallons

Q—What fraction of three drops of volatile oil would be in a tablespoonful of Wine of Cardui? *A*—One three hundredths of *three* drops

Q—What amount, Doctor? *A*—One three hundredths *of* three drops

Q—Of three drops? *A*—Approximately

Q—Have you an opinion as to whether the volatile *oil* would be of any importance when Wine of Cardui is taken in *tablespoonful* doses, three or four times a day? *A*—Such a *dose as you* named to be present there would have absolutely no *significance* whatever

Q—Do you know the dose of valerianic acid? *A*—About 7½ grains

Q—That is the average dose *A*—About 7½ grains.

Q—Assume it to be a fact that 1/60 of a grain of valerianate is found in a *tablespoonful* of Wine of Cardui, so that two gallons of Wine of Cardui would be required to obtain the dose of 7½ grains, or so that a tablbespoonful would contain 1/450 *of* 7½ grains, have you an opinion, on this hypothesis, as to whether the valerianate in Wine of Cardui is of any importance, when the solution is taken in tablespoonful doses, three or four times a day? *A*—*It is* evidently of no importance.

Q—Doctor, do you know the characteristic principle of *viburnum* prunifolium? *A*—Viburnum prunifolium contains a bitter principle, sometimes called viburnin It contains resin, some *tannin* and some valerianic acids

Q—*Would the* tannin when taken by the mouth exert any action on the system? *A*—No *not on the system* Large doses *of* tannin act as astringent *locally*, when *it is* applied, draw the tissues together but since it is destroyed before it is absorbed it never reaches the system practically speaking, and therefore has no action upon the system proper

Q—What is a resin, Doctor? *A*—A resin is a substance that is soluble in water — no — withdraw that — a substance that is soluble in alcohol and insoluble in water

Q—Would it be soluble in 20 per cent of alcohol? *A*—No, it would not

Q—Assume that the extractive substances contained in Wine of Cardui are practically completely soluble in water glycerin and syrup does this enable you to form an opinion as to whether Wine of Cardui contains the resins of viburnum? *A*—Yes it would enable me to form an opinion You stated in your question that the substances — the extractives are soluble in water and similar solvents Now since the resins are insoluble in water and similar solvents it is evident that the solution — the Wine of Cardui does not contain the resin of viburnum or anything else.

Q—Now why why is that Doctor? *A*—I just explained, that the resin being insoluble—

Q—Insoluble in water? *A*—In water—and you were stating that the residue dissolved in water and there evidently can be no resin there

Q—And the menstruum being 20 per cent alcohol? *A*—In 20 per cent alcohol the same thing would be practically true

Q—Now Doctor you said that Wine of Cardui would on the assumptions we have made contain no resins from viburnum In your opinion then would Wine of Cardui represent viburnum prunifolium? *A*—No it would not represent it

Q—Assume that a certain synthetic preparation is made according to a certain formula which, for the purpose of this question we will call A Assume that other synthetic preparations are made by other formulas variously modified by varying the proportions by varying the methods of extraction and by omitting certain constituents Assume that these preparations were made and analyzed by several chemists working independently of each other, and compared by them with a simultaneous analysis of another preparation namely Wine of Cardui Assume that these chemists found marked differences in all the preparations except that which we named A' but that the preparation made according to the formula A agreed completely with Wine of Cardui *in the following respects* except for such small differences as exist in different samples of Wine of Cardui itself Assume that the respects in which agreement was found are the following Color taste valerianic odor specific gravity reaction solid residue and ash nitrates and nitrogen reducing sugar reaction of the distillate to acids and alkalies and the presence of a bitter principle giving the reaction of cnicin Have you an opinion as to whether the product prepared by formula A is or is not identical with Wine of Cardui? *A*—I have an opinion On the basis of what you said I am prepared to assert that the formula A—preparation made by formula A—is identical with Wine of Cardui

Q—Do you state this Doctor now as a fact? *A*—That I state as a fact

DIFFERENCE BETWEEN CARDUUS BENEDICTUS AND CARDUUS MARIANUS

Q—Are you acquainted with the drugs called carduus benedictus and carduus marianus? *A*—Yes

Q—Are they identical? *A*—No *they are not identical*

Q—What are the differences between them? *A*—The two drugs sometimes called carduus benedictus and carduus marianus—there are other names for them also—are derived from different species of thistles Those different species of thistle differ amongst themselves like the various species of grain differ amongst themselves and one might for the sake of comparison say that the benedictus is something like the wheat and the marianus is something like the oats That however is not the extent — full extent of the difference between these two drugs

In the case of carduus benedictus the entire herb is used the thistle just as it stands is cut off the ground and is used in that way generally while it is in flower In the case of the marianus that is not done but the seeds are collected So that the two drugs bear about the same relation to each other as oat meal would to wheat straw That I should say about expresses the differences between the two drugs

Q—Now Doctor are the constituents of these two drugs identical? *A*—No they are not identical

Q—Why? *A*—The characteristic principle of cnicus benedictus the principle to which the action or any action that it may possess—*or is said to possess—is attributed* is a neutral bitter substance that is called cnicin The benedictus contains practically no fatty oil and substances of that kind

On the other hand the carduus marianus which is prepared from a seed contains like most seeds a great deal of fatty oil It is sometimes used as a source of fatty oil like sunflower or corn oil That is its most abundant constituent. It is not definitely known to contain any cnicin If it does it must be a mere trace the merest possible trace.

One can tell the difference at once if one makes a tincture—an extract of the two drugs One only has to look at them and taste them to realize that the constituents are entirely different. You take an alcoholic extract for instance made from carduus benedictus and it forms a straw colored or a little darker brown solution of very bitter taste It looks a little like Wine of Cardui

You make an extract of the carduus marianus with alcohol and you get an almost clear—almost colorless but somewhat milky fluid. If you taste the two, you get a very marked bitter taste in the carduus benedictus due to that principle that I said is called cnicin If you taste the carduus marianus extract, you get the flat oily taste practically without any trace of bitterness making the two of the same strength, say ten parts of the drug in each case, and 100 parts *of alcohol* or something like that

Q—Then this cnicin which you have been talking about, and which comes from the carduus benedictus, is the bitter principle the neutral bitter principle you have been speaking of? *A*—That is the neutral bitter *principle* that I have mentioned

Q—Now is that, or is it not, the active constituent if it has any active constituent, of carduus benedictus? *A*—It is considered the active constituent, in so far as there is any active constituent present I think *one may say* it is the active constituent

Q—Doctor, can you give us any idea of how much cnicin there is in 30 grains of carduus benedictus? *A*—I think there would be about one fifteenth of a grain

Q—Is it soluble in water? *A*—Fairly so not freely soluble but fairly soluble

Q—Do you know whether the so-called solid extract of viburnum prunifolium and carduus benedictus are used in medicines? *A*—Both of these are used in medicines That is they are official in various pharmacopeias and that means of course that they are medicinal used in medicines

Q—How are they prepared, Doctor? *A*—They are prepared by evaporating either the fluidextract or the decoctions of those drugs The exact process varies in different countries

Q—Well now in this evaporation is heat applied? *A*—That is the way in which they are evaporated

Q—Well does or does not the heat that is so applied injure the drug? *A*—Apparently not

Q—Can these extractives be prescribed in the form of—

Mr Hough—Pardon me Did he say apparently not?

The Witness—Yes

Mr Scofield—He said apparently not

Q—Can these extracts be prescribed in the form of pills capsules and tablets? *A*—Those are the forms in which they are commonly prescribed

Q—Doctor do you know whether viburnum prunifolium and carduus benedictus are ever used in the form of teas? *A*—They are commonly used that way

Q—Assume that the residue of the evaporation of Wine of Cardui is soluble in glycerin and in syrup would there be any—

Mr Hough—In what?

Mr T J Scofield—Glycerin and syrup

Q—Would there be any disadvantage in administering them in this form instead of in 20 per cent. alcohol? *A*—There would be no disadvantage

A—Assume that the residue from a tablespoonful of Wine of Cardui could be perfectly dissolved in two teaspoons of 20 per cent alcohol therefore containing one half the quantity of alcohol to the dose Would there be any disadvantage in administering it in that way? *A*—No—if it can be dissolved in that—as you said—there would be no disadvantage in administering it in that way And if as you said it is soluble in water it could be dissolved in a teaspoonful of 20 per cent alcohol making the dose of one fourth

Q—Making the dose of Wine of Cardui one fourth of a tablespoon? *A*—Yes and the amount of alcohol one fourth

Q—Or one fourth of alcohol? *A*—Yes

Q—And still obtain the action of the drug if the drug has an action? *A*—Fully—just the same.

Q—Just the same as in the tablespoonful dose? *A*—Just the same

Q—Now Doctor you stated that a second method of investigating preparations such as Wine of Cardui is by animal experimentation

Whereupon an adjournment was taken until 2 00 o clock p m of the same day

(*To be continued*)

Machinery of Metabolism.—Carl Voit to whom more than any one else the world owes its fundamental knowledge of nutrition, was accustomed to say in his lectures Continual decompositions of matter are always going on in the living cells and the energy liberated in these decompositions is the power upon which the motions of life depend Phenomena of life are phenomena of motion' In truly poetical language, Rubner the most eminent of Voit's pupils has written, 'Mute and still by night and by day, labor goes on in the workshops of life Here an animal grows, there a plant, and the wonder of it all is not the less in the smallest being than in the largest" The workshops of life require fuel to maintain them and a necessary function of nutrition is to furnish fuel to the organism that the *motions of life continue* Furthermore, the workshops of life are in a constant state of partial breaking down and materials must be furnished to repair the wornout parts In the fuel factor and the repair factor lie the essence of the science of nutrition These two factors operate to bring about death from starvation, either the body s own store of fuel becomes exhausted or a part of the machinery necessary for life wears out—Graham Lusk The Fundamental Basis of Nutrition

Correspondence

A Report on the Efficiency and Nontoxicity of Arsenobenzol

In The Journal, March 18, 1916, p 867, Ormsby and Mitchell of Chicago reported on the comparison between salvarsan and arsenobenzol I was one of the first who through Dr Schamberg's kindness was able to give this drug an extensive trial, and according to his statement have at the present time had perhaps the largest experience with it Inasmuch as the Philadelphia product is about to be issued to the medical profession at large, it seems proper to supplement the Ormsby-Mitchell report in order to apprise the profession that the remedy may be used with perfect safety The cases reported herein have been studied with two main considerations in view first, the possible toxicity of the new drug, and second, its relative therapeutic value as compared with old salvarsan

During the past six months, 243 cases of syphilis have been treated at the University Hospital with arsenobenzol These patients have received in all 612 injections The accompanying table classifies the types of cases treated

TYPES OF CASES TREATED

Type	No
Cases of primary and secondary syphilis	98
Cases of gummous syphilis	18
Cases of latent syphilis	85
Cases of hereditary syphilis	14
Cases of tabes dorsalis	14
Cases of acute cerebrospinal syphilis	11
Cases of general paresis	3

In addition, I have given about sixty intraspinal injections, using the arsenobenzol in a dosage of from 0 00033 + to 0 0005 gm Patients thus treated were for the most part tabetics and persons with cerebrospinal syphilis

With regard to the efficiency of the drug, it was noted that the immediate lesions disappeared as promptly as though they had been treated with the older salvarsan preparation In 116 cases in which there were manifest cutaneous syphilids, there have been but four recurrences One of these was a malignant pustular syphilid which returned after three injections in four months with a large gumma of the forearm The other three were in the nature of neurorecidives At the outset, in order to test out the product, and not being familiar with its properties, I gave the drug in somewhat smaller doses than is my custom with the older preparation Thus whereas I customarily give 0 3 mg as an initial dose at the outset, I gave but 0 2 mg, and the succeeding doses were correspondingly smaller I am inclined to regard the four cases of recurrence, therefore, as due to underdosage, and it is noteworthy in this connection that the four cases occurred among the first ones which I treated At the present writing I am using the arsenobenzol in repeated doses equivalent to the dosage employed in the use of old salvarsan In the 612 injections given we can attest to the fact that only three cases showed any reaction These were in the nature of allergic reactions, dyspnea, slight cyanosis and slight cardiac depression occurring during the third injection In a few other cases in which many lesions were present, a rather sharp Herxheimer reaction occurred, as of course happens with the older preparation as well

The intraspinal treatments have all been well borne, have been unattended by any untoward accident, and the therapeutic results have been identical with those produced by similar injections of old salvarsan The method employed has been a modification of the Ogilvie method, namely, the introduction of the salvarsan solution directly into the spinal fluid

From my experience with arsenobenzol it may be concluded that

1 The immediate therapeutic results are fully as good as those following the use of old salvarsan

2 Given with the proper precautions, the drug has shown itself fully as little toxic as the older preparation

These two conclusions refer to intraspinal medication as well as to intravenous

Udo J Wile, M D, Ann Arbor, Mich

Bothriocephalus Latus Infection

To the Editor —In The Journal, May 20, 1916, p 1618, Dr J J Singer reported a case of *Bothriocephalus latus* infection In view of the comparatively few cases that have occurred in this country, or at any rate have been reported, it might be well to place on record one of which the specimen is in the Army Medical Museum The specimen was received Feb 4, 1864, from Dr Hennell Stevens, U S Army, then Medical Storekeeper at Memphis, Tenn Unfortunately he failed to furnish a history, and none has ever been received The specimen is in several pieces, in all about 80 feet Its character as *Bothriocephalus latus* was recognized at once

D S Lamb, M D, Washington, D C

Queries and Minor Notes

Anonymous Communications and queries on postal cards will not be noticed Every letter must contain the writer's name and address, but these will be omitted, on request.

SOME CHAUCERIAN MEDICINE

To the Editor —1 Can you give me any historical essay references based on the middle English literature, especially Chaucer's lines on the doctor in "Canterbury Tales"?

2 What is the significance of (*a*) "gold potable" and (*b*) "image making" in those lines? C C Hinton, M D, *Atlanta, Ga*

Answer —1 Norman Moore's Fitzpatrick Lectures for 1905-1906, entitled "Medicine in the British Isles," Oxford University Press, and Walsh's "Old Time Makers of Medicine," Fordham University Press, may be referred to A good edition of Chaucer for this study is that of W W Skeat, in the notes to which practically all the information requested is found

2 (*a*) "Gold potable" The reference is probably to "Les remonstrances de nature," by Jean de Meun

> C'est le fin et bon or potable
> L'humide radical notable
> C'est souverain medecine

Throughout the middle ages and even much later it was supposed that aurum potabile was a sovereign remedy It is referred to in "Humour Out of Breath," Act 1, Scene 1, in a footnote which calls it "the universal medicine of the alchemist prepared from gold, mercury, etc The full receipt will be found in the fifth and last part of the 'Last Testament of Friar Basilius Valentin,' London, 1670" See also Thompson's "History of Chemistry," i, 164, and Burton's "Anatomy of Melancholy," Part 2, Section 4

(*b*) "Image Making" The reference here is to the belief that by making images of persons from properly chosen materials and *at the right time*, effects, favorable or unfavorable, could be produced on the originals The ascendant is the point of the zodiac which is rising from the horizon at any given moment, and serves as the means of fixing an astrologic epoch The whole meaning of the passage, therefore, is that the doctor knew well how to choose a fortunate moment for making images to be used as charms to help his patients

USE OF ANIMAL GELATIN

To the Editor —1 What is the value of animal gelatin as a food?

2 *In case it is desired to use gelatin, are commercial preparations such as "jello" sufficiently pure gelatin to be used? If not how is it best used* W R Smith, M D, *El Paso, Tex*

Answer —1 Gelatin is an artificial derivative of collagen, the essential basis of white fibrous connective tissue or bone It is a readily digestible protein substance, long classed as an "albuminoid," and known to be inadequate as the sole source of protein in the dietary Gelatin contains approximately the same amount of nitrogen as the more typical proteins, and yields most of the amino acids characteristic of this group of nutrients, but it does not contain the tyrosin cystin or tryptophan groups, all of which are now believed to be indispensable nitrogenous nutrient units for the body For this reason when gelatin alone is supplied as the nitrogenous portion of the ration, nutritive failure ensues

Although gelatin alone cannot maintain nitrogenous equilibrium in nutrition, it can replace a considerable part of the protein usually present in the diet without detriment to the organism It can restore the nitrogenous waste of the body to a certain extent, and yields energy as other foodstuffs do Gelatin attracts attention as a food because of the readiness with which it is digested and tolerated, its freedom from some of the more objectionable products of putrefaction such as indol (owing to the lack of the antecedent tryptophan group), and because of the culinary advantages that it possesses When used liberally in the diet, gelatin should be furnished along with other more complete proteins, such as those of egg or milk It should be noted that gelatin, like other proteins, may yield sugar in the diabetic Inasmuch as gelatin is almost invariably served in the form of jellies which consist very largely of water (usually to the extent of 95 per cent.) the actual nutrient possibilities of an ordinary serving must not be overestimated An ordinary 2 ounce package of gelatin may suffice for several pints of jelly This bulk is often satisfying to the palate when small intake of nutrient is desired

2 We assume that our correspondent refers to the use of gelatin as food Most of the widely advertised commercial gelatin products are sufficiently pure to serve acceptably in the dietary Flavors form an occasional adjuvant There need be no difficulty in selecting a proper food specimen from among the various brands at present sold as gelatin by American makers Brands bearing special trade names are usually considerably higher in price per unit of nutrient They sometimes include flavoring or coloring products in separate packages in the containers According to published analyses, some of the preparations of jelly powders, such as the one mentioned by our correspondent, widely used as quick desserts, consist chiefly of sucrose with sufficient gelatin to make a jelly, and are variously flavored and colored to simulate the color and flavor of natural fruits As a rule their compound nature is more or less clearly indicated on the label Analyses of gelatin preparations and jelly powders will be found in the reports of the Connecticut Agricultural Experiment Station, Food and Drug Products, for 1909 and 1913

Preparations of so-called "vegetable gelatin" usually consist of agar-agar or the gelatinizing carbohydrates of Irish moss (*Chondrus crispus*) and are essentially without nutritive value, though they form attractive dishes and may serve as a vehicle for other nutrients or for laxative purposes

PRACTICE IN GOVERNMENT LANDS

To the Editor —Please give me information concerning the practice of medicine on government property, national parks Indian reservations etc.

R. B Denver

Answer.—The U S Department of the Interior has just issued a bulletin covering the above It states that no business for profit can be conducted on government lands without special permission from the department. That medical service may be available for tourists and others, however, physicians are granted permits by the department to practice in several of the national parks A nominal fee is exacted for these permits, which are granted only to those who are licensed under the laws of the state in which the park is located This relates chiefly to the Yellowstone National Park in Wyoming

At the Hot Springs reservation, Arkansas, physicians who desire to prescribe the waters must register in the office of the supervisor This requires the passing of a medical examination prescribed by the secretary of the interior No fee is exacted for registration, but the applicant must be a physician registered under the laws of the state of Arkansas

In the various Indian reservations contract physicians and full time physicians are utilized Contract physicians are employed after bids have been obtained from reputable licensed physicians practicing in the vicinity where any vacancy occurs Employment follows only after approval has been granted by the Civil Service Commission Full time physicians are employed only after certification from the Civil Service Commission, which from time to time conducts examinations of physicians for the Indian Service.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Alabama Montgomery, July 10 Chairman, Dr W H Sanders Montgomery

Alaska Juneau July 5 Sec. Dr H C De Vighne Juneau

California San Francisco June 27 Sec., Dr Charles B Pinkham R 527 Forum Bldg, Sacramento

Colorado Denver, July 4 Sec, Dr David A Strickler, 612 Empire Bldg Denver

Connecticut Regular New Haven, July 11 12 Sec., Dr Charles A Tuttle 196 York St, New Haven Homeopathic New Haven July 11 Sec Dr Edwin C M Hall, 82 Grand Ave, New Haven Eclectic New Haven, July 11, Sec, Dr T S Hodge 19 Main St Torrington

Delaware Dover and Wilmington, June 20 22 Sec, Dr H W Briggs 1026 Jackson St Wilmington

District of Columbia Washington, July 11 13 Sec, Dr Edgar P Copeland The Rockingham

Florida Jacksonville June 13 14 Sec. Dr E W Warren Palatka

Illinois Chicago, June 21 23 Sec, Dr C St Clair Drake Springfield

Indiana Indianapolis, July 11 13 Sec., Dr W T Gott, 84 State House Indianapolis

Kansas Topeka June 13 Sec., Dr H A Dykes, Lebanon

Kentucky Louisville, June 13 15 Sec. Dr A T McCormack Bowling Green

Maine Augusta, July 6 7 Sec, Dr Frank W Searle 776 Congress St Portland

Massachusetts Boston July 11 13 Sec Dr Walter P Bowers 1 Beacon St. Boston

Michigan Ann Arbor June 19 21 Sec., Dr B D Harison 504 Washington Arcade Detroit

Mississippi Jackson June 20 21 Sec, Dr J D Gilleylen, Jackson

Missouri St Louis June 13 15 Sec. Dr J A. B Adcock, Jefferson City

New Hampshire Concord, June 26 27 Sec. Dr W T Crosby, The Beacon, Manchester

New Jersey Trenton June 20 21 Sec, Dr Alexander MacAlister 429 E State St Trenton.

North Carolina Raleigh, June 27 30 Sec., Dr H A. Royster Raleigh

North Dakota Grand Forks, July 4 Sec Dr G M. Williamson Grand Forks

Oklahoma Oklahoma City July 11 Sec Dr R. V Smith 502 Daniel Bldg Tulsa.

Oregon Portland, July 5 7 Sec., Dr L H Hamilton Medical Bldg Portland

Pennsylvania Philadelphia and Pittsburgh July 11 13 Sec. Mr Nathan C Schaeffer Department of Public Instruction Harrisburg

Rhode Island Providence July 6-7 Sec., Dr Gardner T Swarts Room 313 State House Providence

South Carolina Columbia June 13 Sec. Dr A Earle Boozer 1806 Hampton St, Columbia

South Dakota Deadwood July 11 Sec., Dr Park B Jenkins Waubay

Tennessee Knoxville Memphis and Nashville June 16-17 Sec Dr A B DeLoach, Scimitar Bldg Memphis

Texas San Antonio June 27 29 Sec., Dr John S McCelvey Temple State Bank Bldg Temple

Utah Salt Lake City July 3 Sec, Dr G F Harding 407 Templeton Bldg Salt Lake City

Vermont Burlington, July 11 13 Sec., Dr W Scott Nay Underhill

Virginia Richmond, June 20 23 Sec., Dr J N Barney, Fredericksburg

Washington Tacoma July 4 Sec Dr C N Suttner Walla Walla

West Virginia Charleston July 11 Dr S L Jepson Charleston

Wisconsin Milwaukee, June 27 29 Sec. Dr J M Dodd, 220 E 2d St Ashland

Wyoming Laramie, June 14-16 Sec. Dr H. E McCollum Laramie.

MEDICAL COLLEGE MERGER IN PHILADELPHIA

Three medical colleges in Philadelphia have just been merged into one larger teaching institution which now provides for both undergraduate and graduate medical instruction The union of the Medico-Chirurgical College of Philadelphia with the University of Pennsylvania as its Graduate School of Medicine has been under advisement for several months and later efforts were made to bring Jefferson Medical College also into the merger These efforts have been successful

On Friday, June 2, a plan for the merger of the Jefferson Medical College with the University of Pennsylvania, School of Medicine, was submitted by a joint committee to the board of trustees of the two institutions and was unanimously adopted by those boards The joint committee consisted of Provost Edgar F Smith, Effingham B Morris and Randal Morgan, representing the University of Pennsylvania, and President William Potter, Simon Gratz and Alba B Johnson representing Jefferson Medical College. The plan as adopted is as follows

The Plan

The boards of trustees of the University of Pennsylvania and of Jefferson Medical College of Philadelphia have agreed that the facilities now possessed by them for instruction in medicine and surgery shall hereafter be utilized and enlarged in combination rather than in a continued distinctiveness

The identity of the two institutions, with maintenance of the inherited values of their respective names, and without change in the rights, powers and authorities vested in them by their respective charters and organic laws, is hereby recognized and preserved inviolate

The following plan is suggested for the accomplishment of these purposes

First—The united medical schools hereby established shall be named and known hereafter as "The Medical School of the University of Pennsylvania and the Jefferson Medical College of Philadelphia"

Second—The respective faculties of the two schools shall hereafter become one faculty for purposes of instruction to students, divided into groups of individual members from both, e g, surgical group, medical group, anatomy group, physiologic chemistry group, research group, etc Each group shall meet together annually and decide on a roster determining and providing what each individual professor shall teach, where he will teach, and the hours of his instruction Students may then elect which professor or professors in given subjects they will hear throughout the term

Third—The government of the united medical schools in its general administration and in its business affairs shall be vested by action of the boards of trustees of the two institutions in a joint committee of eight to be known as the "United Medical Committee," of which the provost of the University of Pennsylvania shall ex officio be chairman, and the president of the Jefferson Medical College of Philadelphia shall be vice chairman, and the other six members shall be three trustees from each board—not of the medical profession—appointed by each of the boards of the two institutions and serving during the pleasure of the respective boards

Fourth—The supervision of academic work, of hospital work, and of research work shall be vested in a dean and a vice dean who shall discharge the usual duties incident to these positions, with jurisdiction over both of the present schools and of such others as may be established They shall be elected annually by the United Medical Committee on the nomination of the chairman and vice chairman of that committee, each of the united medical schools being represented in such election

Fifth—The dean and vice dean shall constitute a curriculum committee, which shall be charged with the duty of making a roster that will properly divide the hours of instruction among the different groups and obviate any difficulties that may arise in the selection of hours

Sixth—Examination in course and for final degrees shall be conducted by a commission selected and agreed on from year to year by the dean and vice dean in consultation with the several groups

Seventh—Elections of members of the faculty of the school, or appointment of any person on the teaching staff, shall be made by the United Medical Committee, subject to confirmation of such elections or appointments by the respective boards of trustees of the two institutions, and subject to and in accordance with the provisions of their respective statutes and by-laws In like manner changes which it may be desirable to make from time to time in the faculty or in the teaching staff, and retirement of all professors, assistant professors, or instructors, shall be made by appropriate action of the respective boards of trustees, in accordance with their respective statutes and by-laws, only on and after recommendation by the United Medical Committee

Eighth—The diplomas of graduates of "The Medical School of the University of Pennsylvania and the Jefferson Medical College of Philadelphia" hereby established shall be signed by the provost of the University of Pennsylvania, the president of the board of trustees of the Jefferson Medical College of Philadelphia, and by the dean and vice dean, and shall bear the corporate seals of both institutions

Ninth—The respective alumni associations of the two institutions may continue their independent existence, and any graduate of the united medical schools may join, at his pleasure, either or both of said associations

Tenth—There shall be a treasurer chosen by the United Medical Committee, and subject to the directions of that committee as to the receipt and expenditures of available resources

Eleventh—The budget of estimated income and expenditures of the united medical schools shall be presented, each year, by the United Medical Committee to the respective boards of trustees, for their consideration and approval, and said committee shall have no authority to expend any moneys, other than those provided by the said budget, without the approval of the respective boards of trustees

Twelfth—No moneys or real or personal property heretofore given, devised or bequeathed, or that may hereafter be given, devised or bequeathed to either of said institutions separately, for a specific purpose, shall be in any manner diverted from such purpose

Subject to this provision, all tuition fees, income from invested funds, gifts by individuals, legislative appropriations, or receipts from any other source, shall be applied to the support of the united medical schools

Thirteenth—All moneys, or property of any description whatever, whether real or personal, now constituting the endowment fund of either of the hospitals connected with the two institutions, and all gifts, devises, bequests, or appropriations by the Commonwealth of Pennsylvania that may hereafter be made to either of them specifically, shall continue to be the separate property of such hospital, but wherever any such gift, devise, bequest or appropriation shall hereafter be made to said hospitals jointly, or as constituent parts of the united medical schools hereby established, a division shall be made between the two hospitals in accordance with their needs, by action of the United Medical Committee, and such division shall be set forth in the annual budget

Fourteenth—Except so far as they shall be used for clinical purposes and the instruction of students of the united medical schools, the respective hospitals of the two institutions shall continue to be under the charge and control of their respective boards The use of these hospitals for clinical and teaching purposes shall be under the direction of the United Medical Committee, pursuant to such arrangements for such use as shall have been made by that committee with the respective boards of trustees

Fifteenth—The students of the united medical schools shall have the use of the libraries and museums of both schools They shall also have the use of the university's dormitories, and all other privileges and relationships now enjoyed by the students of all other schools and departments of the university, or which may be hereafter enjoyed by them, and on the same terms and conditions

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Book Notices

The Institutional Care of the Insane in the United States and Canada By Henry M Hurd, William F Drewry, Richard Dewey, Charles Pilgrim, G Alder Blumer and T J W Burgess Edited by Henry M Hurd, M D, LL D, Emeritus Professor of Psychiatry, the Johns Hopkins University Cloth Volume I Price, $2 50 Pp 497, with illustrations Baltimore The Johns Hopkins Press, *1916*

This series, of which only Volume I has been issued, will concern modifications of methods for the care of the insane in America It is evident that during the past half century a gradual evolution has occurred in the care of the insane which points toward the ultimate cure of such persons The authors state in the preface

> The movement towards the prompt treatment of curable cases without the formality of legal commitment, and under the same conditions as in admission to a hospital for general bodily disease, gives every hope that at an early day cases of recent attack may be received everywhere promptly, and that greatly increased numbers can be cured Cases of a chronic nature are also now much more satisfactorily dealt with in institutions on the cottage plan, with outlying colonies for the employment of patients, and have a correspondingly better opportunity to attain self support These movements promise to make material changes in future methods of caring for the insane

Volume I takes up the history of the Association of Superintendents of American Institutions for the Insane which existed from 1844 to 1893, and the American Medico Psychological Association which followed The book considers the care of the insane from the early colonial days down to a more modern period A special chapter is given to the work of Dorothea Lynde Dix, then follow the growth of the country system and colonies, and a discussion of the growth of hospitals and development of hospital architecture Chapter VI is devoted to reforms in caring for the insane, medical and nonmedical treatment employment, individual treatment, and the growth of psychopathic hospitals and research work in hospitals The next chapter considers the establishment of training schools for nurses and training schools for attendants, following which is a short chapter devoted to the private care of the insane Then follows a chapter on the law of insanity the commitment and discharge of the insane, admission of voluntary patients and the care of the criminal insane Immigration and the care of the alien-born in relation to the state cost of insanity are the exceedingly important topics next considered Another chapter is devoted to insanity among the negroes, North American Indians and those in South Dakota, the Chinese and Japanese in the United States The last two chapters of this volume are devoted to a census of the insane, giving statistics of the population in various states, the final one is devoted to insanity in Canada

The work is thorough, interesting and practical, a credit to all who have been concerned in its compilation

HYSTERIA AND ACCIDENT COMPENSATIO Nature of Hysteria and the Lesson of the Post Litigation Results By Francis X Dercum M D Ph D Professor of Nervous and Mental Diseases Jefferson Medical College, Philadelphia Cloth Price, $2 Pp 120 Philadelphia The George T Bisel Company 1916

This book presents the subject of "accident hysteria," in as condensed and readable a form as possible, for legislators, lawyers and sociologists 'Railway spine" came with the advent of the railroad and has frequently appeared in personal injury litigation According to the author after an accident there often develop cases of "traumatic hysteria" or, as the author tersely puts it, "litigation hysteria" This is a condition which preexists in the individual It is not the same as hysteria caused by a bona fide injury or fright It is produced by the psychology of compensation The author s experience has shown that these imaginary ills take flight with the settlement of the case The same situation is to be found under the workmen s compensation acts Usually these laws have made no adequate provision for separating the spurious from the real A detailed examination of the patient made by an impartial scientific specialist will usually distinguish between the two In Germany by reason of intensive industrial legislation, this so-called "pension hysteria" has developed to a greater extent perhaps, than in many other countries This seems to be by reason of the German method of paying compensation, which continues during the period of disability while other countries have a cash settlement basis Thus, in Denmark the percentage recovering from traumatic neuroses is 93 6 In Germany it is only 9.3 per cent The author concludes that the solution of the problem is to deny compensation in cases of "litigation hysteria ' This has been advocated in both Germany and France, in Sweden this method is actually pursued by the insurance societies To bring legislator lawyer and judge to a proper understanding of these cases in order that justice under the law may more nearly obtain is the work of the scientific expert. In the opinion of the author, this is a matter of education and an immediate and concerted effort should be made by the medical profession to bring about its consummation

A LABORATORY COURSE IN SERUM STUDY Bacteriology 208 Being a Series of Experiments and Diagnostic Tests in Immunology Carried Out in an Optional Course Given to Medical and Graduate Students in the Department of Bacteriology, College of Physicians and Surgeons Columbia University New York by the Writers By Hans Zinsser M D J G Hopkins, M D and Reuben Ottenberg M.D Cloth Price, $1.25 Pp 184 New York The Macmillan Company 1916

The primary purpose of this book is indicated by the title, and seems to be to guide the student carefully in carrying out fundamental experiments, and to draw the conclusions indicated by the results The book will be of much service to those planning similar courses and to students and physicians who wish to become familiar with the technic of immunology and serology, not merely for the purpose of conducting diagnostic tests, but also in order to grasp the fundamental principles

Medicolegal

Responsibility for Loss of Drainage Tube in Body of Child

(Cyr vs Landry (Maine), 95 Atl R 883)

The Supreme Judicial Court of Maine sustains a motion by the defendant for a new *trial after a verdict against him* for alleged malpractice in connection with the loss of a drainage tube in the body of a child The court says that the only issue under the plaintiff's declaration was whether the tube was lost through the negligence of the defendant, but the case was tried also on the issue of whether if the tube had entered the pleural cavity through accident, or the fault of another than the defendant, did the defendant then exercise such care to discover whether it was in the cavity as ordinary skill and knowledge required? In other words was he negligent, in view of the professional skill required in not making a reasonable effort to discover whether the tube was in the cavity? Another surgeon had operated on the child October 16, for the removal of fluid from the pleural cavity and last saw the patient on the 31st The plaintiff took charge of the case, November 2 If the drainage tube which the other surgeon left fastened with a safety pin through the gauze and the tube was in the body of the child when the defendant came, he was not guilty of malpractice If he took the tube out and attempted to secure it by the mere use of sticking plasters and on that account it dropped into the cavity, he was guilty The testimony in the case was conflicting but the mere fact of conflicting testimony is not a sufficient basis, in all cases for the foundation of a verdict The evidence was ample to persuade a reasonable *mind* that the tube was lost through the improper manipulation of the dressing by the child's mother, and that the latter knew or had every reason to know, that through her own fault it had dropped into the cavity And in view of the fact that it was impossible for the tube to enter the cavity unless the safety pin was removed, and that the defendant was completely misled by the denial of the child's mother that she had interfered with the dressing, and that she was charged with every reason to believe that the tube was in the body yet withheld the information it is the opinion of the court that when the defendant directed her time and again to take the child to the hospital for an operation, if she believed the tube was *in the body*, he exercised such care under the circumstances of the case, as ordinary medical skill and knowledge required The verdict rendered against the defendant should be set aside on both issues

Adulteration and Misbranding Due to Alcohol—Scope of Pure Food Law

(Hoefler vs Mickle (Ore), 153 Pac R 417)

The Supreme Court of Oregon affirms a judgment in favor of the defendant, whom it was sought as food and dairy commissioner of the state, to prevent from seizing and confiscating some candy manufactured by the plaintiff *and styled* "Centennial Chocolates" which contained not to exceed 1 05 *per cent by volume of alcohol without* its being mentioned in the label The court says that this litigation arose under the pure food law of Feb 26 1915 The questions to be determined were whether the plaintiff had in possession with intent to sell or distribute an adulterated article of food or one which was misbranded The object of the act *is* to promote purity of food products and to protect the public against deception in such articles To this end the law has denounced adulterations and deceptive labels In such cases as the one in hand, for instance, a parent buying candy for his children has a right to know whether it is indeed pure confectionery or a mixture of sugar and whisky or other intoxicating liquor Chocolate, a product of cacao seeds roasted and ground and often mixed with sugar, is a harmless article of food and *if true to the label* admitted in this suit, would not be harmful to any one On the other hand if it contains an ingredient "injurious or detrimental to health of consumers,' as mentioned in Subdivision 16 of

Section 21 of the act, or, as stated in Subdivision 5 of Section 35 on misbranding, if it contains "any deleterious substance", it is misbranded within the meaning of the act Alcohol is classified by all toxicologists as a poison Considered in the light of legislation from the foundation of the state to the present, it is a substance deleterious to health It has always been under the ban of the law as an enemy to the physical welfare of the people Without reference to whether or not a food commissioner has established a standard of purity for the article of food called "candy," the fact that the confection in question contained 1 05 per cent of alcohol was sufficient to bring it within the sixteenth subdivision of Section 21 defining an adulterated article of food, for the simple reason that free alcohol is injurious and harmful to the health of any one who partakes of it It was strongly urged that Section 35 of the act is indefinite and uncertain, and particularly that it is impossible to determine whether the third subdivision relates to drugs or to food By its own terms the section is made to apply to all articles of food Referring to the earlier Section 20, it is found that the term includes all articles used for food or drink or intended to be eaten or drunk by man, whether simple, mixed or compound This definition is wide enough to include within its terms drugs which are intended to be taken inwardly by individuals In the statutory sense, therefore, such drugs are food, and for the purposes of Section 35, construed with Section 20, it matters not whether Subdivision 3, stating certain cases which shall be deemed misbranding, be applied to the bread of the baker, the candy of the confectioner, or the drugs of the physician The stipulation of facts measured by this enactment disclosed that the article in question was not only adulterated, but also misbranded

Violation of Medical Practice Act Sufficiently Alleged

(Young vs State (Tex), 181 S W R 472)

The Court of Criminal Appeals of Texas affirms a judgment of conviction of defendant Young of unlawfully practicing medicine The court says that the defendant moved to quash the information and complaint because they did not allege that he had not recorded a certificate or diploma in the county of his residence They alleged that he practiced medicine "without having first obtained from an authorized board of medical examiners a certificate of professional qualifications, and without having a diploma from some accredited medical college" If he had obtained a certificate or diploma and failed to record it in the county of his residence, he would be guilty, and if he had such certificate or diploma, it would be necessary to allege that he had not recorded it in the county of his residence before a conviction would be authorized But when the information alleged that he had never obtained a certificate or diploma, this language necessarily implied and charged that he had not recorded authority in the county of his residence It is always better to follow the language of the statute, but this is not absolutely essential, if language of equivalent import is used Nor did the court err in striking out a plea of former jeopardy or acquittal This information alleged that on or about March 12, 1915, and thence continuously up to the date of filing the complaint in this cause, which was April 27, the defendant did unlawfully engage in the practice of medicine, and did prescribe for and visit Mrs Thad Pines, etc This covered a specific time from March 12 to April 27 The other information also covered a specific time, from May 10, 1915, to May 12, 1915, and alleged that the defendant engaged in the practice of medicine, and did treat one W W Prior They were separate and distinct offenses alleged, and occurred at separate and distinct times The state had to prove in one instance that the defendant treated and offered to treat Mrs Pines, and in the other Mr Prior As the statute specifically defines the words "practicing medicine," the court did not err in not admitting testimony as to the general meaning of those words Furthermore, there was no error in admitting the testimony of one Braden, which showed that the defendant treated his wife and that he received his board and lodging as compensation for the medicine furnished and services rendered

Society Proceedings

COMING MEETINGS

American Medical Association, Detroit, June 12 16

Alpha Omega Alpha Society, Detroit, June 12
American Academy of Medicine, Detroit, June 9 12
American Association of Anesthetists, Detroit, June 12
American Proctologic Society, Detroit, June 12
American Therapeutic Society, Detroit, June 9 10
Montana State Medical Association, Miles City, July 12 13
National Association for Study of Epilepsy, Detroit, June 16
New Jersey Medical Society, Spring Lake, June 20-22
Washington State Medical Association, Seattle, July 12 14
Western Roentgen Society, St Louis, June 9 10

ASSOCIATION OF AMERICAN PHYSICIANS

Thirty First Annual Meeting, held at Washington, D C, May 9 11, 1916

Dr Henry Sewall, Denver, in the Chair

SYMPOSIUM ON ACIDOSIS

Biochemistry of Acidosis

Dr Lawrence J Henderson, Boston The equilibrium between acids and bases is essential to life Fluctuations in equilibrium occur, but normally the limits of fluctuation are narrow Wider fluctuations in these equilibriums occur pathologically, but the acid-basic fluctuations do not, as a rule, involve changes in the H-ion concentration Acidosis is defined as any disturbance of the acid basic equilibrium whereby the power to resist acids in the body is lost It is now possible to say that the main change in acidosis is the loss of blood bicarbonates The bicarbonates are to be regarded as the *third* constituent of the blood reckoning water first, salt second, and bicarbonate third This third constituent is specially subject to fluctuations, owing to the constant physiochemical interchanges between blood and respired air Since H-ion concentration is proportional to the reactions between bicarbonates and free carbon dioxid, the ratio of free carbon dioxid and bicarbonates is kept fairly constant by the mechanism of ventilation Hence, H-ion concentration is now regarded as the hormone of respiration The maintenance of the acid-base equilibrium becomes more complicated in pathologic states, and always is related to and dependent on the general metabolism of the body Beneath all metabolism is a constant diminution of blood bicarbonates, unless repaired, this leads to acidosis The carbon dioxid tension of alveolar air and of the blood, together with the measure of alkali ingestion, are the measures of acidosis Neither ammonia concentration nor urinary findings are safe guides Attempts to explain general pathologic states on basis of H-ion concentration or acidosis are not justified Any attempt to treat a disease like nephritis by the indiscriminate administration of large amounts of alkali is malpractice Small amounts of alkali, given over a long time, are allowable, and when they are so given, acidosis is impossible

Acidosis in Infants and Children

Dr John Howland, Baltimore Acidosis in children is a dangerous but often an acute, self-limited disease It is not merely an acetonuria, but depends on a loss of the acid base equilibrium of the blood Hyperpnea is the clinical sign laboratory tests are the indexes, these being carbon dioxid tension of alveolar air, H-ion concentration of blood, and alkali reserve of blood The natural low level of carbon dioxid tension and low H-ion concentration in the young explain susceptibility to acidosis Onset of acidosis is marked by hyperpnea, coma soon ensues the alkali reserve may be restored, but unless done quickly, death follows The presence of acid phosphates in the blood in excess (from five to fifteen times the normal), continued long enough, would rob the body of bases Restoration of bases does not always stop the accumulation of acid phosphates Acidosis is seen in many diseases of infancy and childhood, and should always be kept in mind, its early, rational treatment may be the means of saving life

Acidosis in Diabetes

Dr R T Woodyatt, Chicago The explanation of the occurrence of acidosis in diabetics depends on definition of difference between the diabetic and the normal individual The proportionality between glucose utilization and wastage depends on rate of intake. It may be said that with a rate of glucose intake high enough, the normal individual becomes diabetic, with the intake low enough, the diabetic acts like the normal individual The difference is in the wastage The occurrence of acidosis in diabetics depends on this It has been found that one molecule of carbohydrate must be burned to care for three molecules of higher fatty acids If this ratio cannot be maintained, the body "smokes" with unburnt fats, and acetone betahydroxybutyric acid, and diacetic acid appear in the urine In diabetics the absolute rate of carbohydrate utilization is low, and it is necessary to bend down the rates of protein and fat metabolism to meet that of the carbohydrates Thus the application of rest, warmth and fasting in the treatment of diabetes is rational Acidosis in diabetes may always be accounted for in the way described, except in certain cases, as its occurrence in the course of septic processes, such cases may be called accidental rather than diabetic acidosis

Acidosis in Acute and Chronic Diseases

Dr. Channing Frothingham, Jr., Boston The finding of acidosis in other diseased states than diabetes led to a study of carbon dioxid tension of alveolar air, H-ion concentration of blood, acetone and ammonia-nitrogen output in urine, and soda utilization in a large and diversified series of cases The results of the study may be summarized thus In adults, acidosis of the diabetic type does not exist in a large number of miscellaneous diseases, but a certain form of acidosis does exist (as shown by Howland) which may be recognized by available tests

Investigations in Diagnosis and Treatment of Acidosis

Dr. Leonard G Rowntree, Minneapolis The H-ion concentration of the blood must be kept at a normal level to maintain life Studies with the electrometric method have established the fact that the dialysis-indicator method may be depended on The method is simple and absolute Studies of the "buffer" values of the blood (ability to care for acid-basic fluctuations without disturbance of the H-ion concentration) indicate the normal to be 0 36 In acidosis, the "buffer" value for both acids and bases is reduced or lost The mechanism of changes in 'buffer' value is not known It may be said that true acidosis occurs when there is a change in H-ion concentration of the blood, compensated acidosis occurs when there is a change in the buffer value without change in H-ion concentration In disease states, acidosis and disturbances of H-ion concentration may be corrected without benefit to the patient The administration of alkalies beyond the point of correction of acidosis is harmful alkali therapy, therefore, should be controlled by available tests

Discussion on Symposium on Acidosis

Dr Yandell Henderson, New Haven, Conn The acidosis we used to talk about is certainly not the acidosis of today The acidosis of diabetes is not the acidosis of asphyxia, or of nephritis We might better in one case speak of ketonuria, and in another, of low carbon dioxid states, and so on In 1911 I was a member of Haldane's Pike s Peak expedition, and all of the party had acidosis when a sufficient altitude was reached, if the carbon dioxid tension is taken as the index I am rather skeptical of the hurtful effects of acidosis I have not seen figures indicating a more severe acidosis than I persistently had on Pike s Peak when I was feeling particularly well The description given by Dr Henderson was on the basis of sea level data But on going above sea level one s acidosis increases with the altitude, in a caisson, acidosis diminishes Miss Fitzgerald of the Haldane expedition, has shown this as a result of hundreds of observations made at various altitudes The net result of her work is that one can determine the altitude of any community by the measure of the carbon dioxid tension of the alveolar air of the inhabitants, or, in other words, by their acidosis It is safer to keep in mind the facts From the urinary standpoint, acetonuria may be found, from the respiratory standpoint, variations in carbon dioxid tension or volume of ventilation may be measured, from the point of view of the blood, disturbances of H-ion concentration may be noted, and other measures of the body's alkali-acid balance may be made But if all of these measures are to be accepted as measures of acidosis, we shall encounter cases of acidosis in which the acidosis is not a condition of acid blood at all, because the H-ion concentration of the blood may still be normal It is necessary, therefore, to formulate and keep clearly in mind just what in the future shall be known as acidosis

Dr E J Van Slyke, New York Much of the discussion has dealt with the relations between the kidney, lung and blood functions in acidosis The phenomena arising in these various systems are corollaries one to another I agree with Henderson that acidosis is a loss of the normal relationship between acids and the bicarbonates of the blood I also agree with Rowntree's classification of compensated acidosis and true acidosis on the basis of undisturbed and disturbed H-ion concentration, respectively With regard to reduction of carbon dioxid tension of alveolar air, this is only an indirect measure of the H-ion concentration of the blood, and it cannot be regarded as synonymous with acidosis It is an exact measure of the H-ion state of the blood only when the lungs are functioning normally and under fixed conditions of temperature and atmosphere The same may be said of the urinary findings certain urinary changes are recognizable and acceptable as indirect evidences of acidosis, but they are not synonymous with acidosis, and they depend on renal integrity and other factors for constancy

Dr Theodore C Janeway, Baltimore Thus far we have talked of acidosis in terms of ketonuria, but it has now been shown that the modern conception of acidosis, acidosis in its strict sense, is the true cause of diabetic coma Most of the criticisms have been made on the fact that acidosis is merely a biochemical event and not a just measure of disease, but it is the acidosis that causes the hyperpnea, etc and it is possible to conceive of acidosis as the cause of functional disturbances without sacrificing the truth of Henderson's remark about the nonspecificity of the blood changes in this condition The newer types of acidosis have to be recognized it is only necessary to remember that there are fundamental metabolic differences in the origins of the various types

Dr E P Joslin, Boston Two thirds of all diabetics (all diabetic children) die in coma, in fact, all diabetics dying in the first year of the disease die of coma If it can be shown that the number of diabetic fatalities in the first year of the disease has been lessened, this must be because the treatment of acidosis has improved with the improved treatment of diabetes Such statistics are now available and show that the mortality of diabetes in the first year has been greatly reduced

Dr C F Hoover, Cleveland One point bearing on the relation between acidosis and carbon dioxid tension of alveolar air needs to be emphasized There seems to be an impression that there is a definite relationship between carbon dioxid tension of alveolar air and the amplitude of ventilation There is no such definite constant relationship I have seen cases of hyperpnea without acidosis, and cases of acidosis with hypopnea

Dr H A Hare, Philadelphia Thirty years ago I learned in Ludwig's laboratory that the blood is the most carefully protected tissue of the body, and that one should be careful to do no harm by introducing strange substances into it This warning should be heeded in view of what has been said here about the harmful effect of too active alkali therapy in acidosis

Dr. Lawrence J Henderson, New Haven, Conn It is clear that in a great variety of diseases there is a loss of ability to protect the blood against acids, and this condition ought to be called acidosis Because alkalies have been abused is no reason for refusing bicarbonates in small quantities and over long periods, for bicarbonate is the *third* constituent of the blood While acidosis cannot be held to be the cause of disease, it can be held to be the cause of syndromes in disease, for one, he believes that acidosis is the cause of diabetic coma It is possible to overcome the acidosis of diabetic coma without curing the condition, as had been pointed out This may be due to the fact that the cells of the body are not so readily and quickly influenced by substances introduced into the blood in treatment, and evidence of acidosis may disappear from the blood while the condition persists in the tissues

(To be continued)

THE AMERICAN NEUROLOGICAL ASSOCIATION

Forty Second Annual Meeting held at Washington, D C, May 8 10, 1916

The President, Dr Lewellys F Barker, Baltimore, in the Chair

Presidential Address War and the Nervous System

Dr L F Barker, Baltimore So far as wounds of the brain and spinal cord are concerned, the accepted views regarding topical diagnosis are being corroborated It has been established that certain organic lesions of the central nervous system may be caused by modern high explosives without external wound Surgeons are unanimous in urging the thorough investigation of every head wound, no matter how trivial it may at first seem to be As regards the peripheral nerve injuries, it has been shown that loss of power due to section of tendons or muscles may sometimes be confused with paralysis due to lesions of the nerves themselves Contrary to what many expected, nervous states not due to organic lesions, though fairly numerous, have in reality made up but a very small proportion of the total number incapacitated by the war All the well known types of the functional nervous disturbances have been encountered As regards the psychoses, it is surprising that such a small number of cases of insanity have been reported It is asserted that the majority of soldiers in whom psychoses have been observed either had symptoms of the disease before the war or had given definite evidence of predisposition to mental disorder The evidence seems to favor the view that the human nervous system is today better able to stand strain than ever before in its history

The Differentiation and Organization of Sensations

Dr Stewart Paton Princeton, N J As the result of observations on the embryos of some of the higher vertebrates I want to emphasize two points first, the great necessity of looking at the neurologic phenomena from a broad biologic standpoint, and second, the great value that still comes to us from a study of comparative neurology In the chick embryo of from fifty-five to fifty-seven hours of incubation, the motor half of the reflex arc is developed far in advance of the sensory half This tract is developed from the lower caudate quarter of the cord up to the level of the third nerve At 120 hours the development of the third nerve to its terminal distribution can be followed Evidently this is an ancestral inheritance The sensory half of the arc is very gradually superimposed on the motor sector When the embryo first responds to stimuli from the outside world the first organ to come in and modify responses is the thyroid, and a little later the suprarenals At this period from 120 to 125 hours, there is an enormous differentiation in the sympathetic nervous system Only very much later do the sex organs apparently come into the neural circuit

Neuraxial Differentiation of the Fibers from the Horizontal and the Fibers from the Vertical Semicircular Canal

Dr Charles K Mills and Dr Isaac H Jones, Philadelphia Cajal has shown histologically that fibers from the vestibular portion of the eighth nerve enter Deiters' nucleus and continue from the inferior cerebellar peduncle into the cerebellum itself We believe that (1) this path includes the fibers from the horizontal semicircular canals exclusively, and that (2) the fibers from the vertical canals have an entirely different course The former are confined to the oblongata, while the latter ascend into the pons In twenty-eight cases in which the labyrinths themselves and the eighth nerves were normal and the horizontal canals gave normal reactions, the vertical canals failed in some or all of the well known responses That the labyrinths themselves were normal was made probable by the presence of perfect hearing, and corroborative evidence of neuraxial lesions was additional confirmation In five cases, stimulation of the vertical canals produced no nystagmus, no vertigo, no past-pointing and no falling, and yet violent projectile vomiting occurred This showed that the vertical canals themselves were functionating, in fact, there was even a hyperactive response of the tenth nucleus to the stimulation of the canals In one case in which the lesion was clearly thrombosis of the right posterior inferior cerebellar artery, the right horizontal canal failed to respond normally, whereas reactions from the right vertical canals were normal Therefore, a central differentiation of the fibers from the different canals must exist In a case of Mills the fibers from the vertical canals failed to respond, while those from the horizontal canals reacted In this case a necropsy was obtained and a microscopic examination with serial sections was made It shows a glioma of the upper part of the pons, the lower half of the pons and the oblongata being normal This proves that the vertical canal fibers extend as far at least as the middle of the pons In a case of Dr T H Weisenburg, symptoms of involvement of the right sensory portion of the fifth nucleus and the right sixth nucleus and sensory symptoms in the left extremities indicated a lesion in the right side of the pons posteriorly in the region of the middle cerebellar peduncle In this case, stimulation of the right vertical canals failed in all responses, whereas the right horizontal canal and all the canals of the left ear gave normal reactions In our experience, interruption of the impulses from the vertical canals is produced by tumors of the cerebellopontile angle, internal hydrocephalus causing pressure on the floor of the fourth ventricle, and intracerebellar tumors causing pressure on the pons

Sensory Disturbances of Cerebral Origin

Dr Alfred Gordon, Philadelphia I find that the generally adopted views concerning sensory disturbances of cerebral origin do not always present the real condition For example, in one of my cases there was a large hemorrhage strictly limited to the parietal lobe, nevertheless, there was a hemiplegic condition on the opposite side Also in a case with involvement of the very posterior portion of the internal capsule, which is supposed to be purely sensory in function, there were no sensory disturbances at all during life My conclusions are that, in spite of the generally accepted views concerning sensations of cerebral origin, certain conservative reservations should be made whenever diagnostic deductions are to be made

DISCUSSION

Dr David I Wolfstein, Cincinnati A colored man came into our receiving ward but was not admitted because nothing could be recognized He came a week later and we found that he had localized convulsion of the face and arm and there was very complete arteriosclerosis He also had a loss of the position sense and impairment of the localizing sense The Roentgen rays showed that he had been stabbed in the head with a penknife and that a piece of the blade was extending into the precentral convolution The blade was extracted, and the man recovered promptly from the convulsions, but the arteriosclerosis and the disturbance of the sensations remained as before

Dr H H Hoppe, Cincinnati I recall a case of tumor in the arm center in which the first manifestation was pain in the tip of the finger, this disturbance of sensation preceding the jacksonian seizures The tumor was located in such a way as to cover both the ascending and the parietal lobe It was impossible to tell where it originated

Tic Spasmodique Produced by Cerebellopontile Tumors

Dr Harvey Cushing, Boston A patient was sent to the Brigham Hospital with the diagnosis of right parietal tumor producing jacksonian attacks of the left face He was conscious and could turn his head even though the attack was going on He was very certain on two or three occasions that the attack, and the spasm with the sensory disturbance, which he said came with it, had spread into the arm and side A careful examination made it quite evident that this was a cerebellopontile tumor of the usual type He was operated on and a tumor was found relatively early and removed, so far as one is justified in removing these things, leaving the capsule. In a series of from fifty to sixty pontine cases this was the only case in which I observed these definite attacks, and this began originally as nothing but a little blepharospasm of the left eye The patient was having attacks every ten minutes when he came to us They subsided after the operation Since this I have seen one other example of almost exactly the same kind

DISCUSSION

Dr J Ramsay Hunt New York In my papers on the sensory route of the facial nerve I have emphasized the production of reflex spasms of the face. I have had a series of cases of reflex quiverings and spasms of severe degree. In one case there was a spasm only of the auricular mechanism Evidently only certain cells of the facial nucleus were in a state of excitability Therefore I do not think that these cases necessarily depend on pressure on the pons

Dr William G Spiller, Philadelphia Some years ago Dr Mills had a case of spasm confined to one side of the face which at necropsy showed tumor of the cerebellopontile angle. I had a case of a man struck on the right side of the forehead He said that the eyelids of both sides were affected Dr Jones concluded that there was a tumor of the cerebellopontile angle, and this was confirmed by necropsy

Dr. W B Cadwalader, Philadelphia In a case which I have observed there were clonic movements of one side of the face without loss of consciousness We decided that there was probably a cerebellopontile growth Necropsy showed an endothelioma a short distance anterior to the eighth nerve

Stock-Brainedness The Causative Factor in the So-Called Crossed Aphasias

Dr. Foster Kennedy New York The cause of the indecision in regard to the location of the speech centers and, therefore the causation of aphasia, lies in the fact that apparently irrefragable evidence can be produce by the protagonists of each of the different views The case used to disprove the validity of Broca's area only impugns the theory of constant conjunction of right-brainedness and left-handedness or vice versa. I want to suggest that the simple statement that a given patient is right-handed or left-handed is not adequate. After investigating the question of a patient's handedness only by investigating also the prevalence of the type of handedness in his stock shall we be able to throw some light on a very obscure chapter of neurologic medicine In the literature of aphasia one finds that but few cases disagree with the general hypothesis that in right-handed persons the centers of language are situated on the left side of the brain In the few instances in which aphasia has resulted from injury to the right brain some anomalous and adventitious circumstance has usually been brought forward to account for the situation. It would appear that this trend when present in the stock may produce in a few right-handed individuals of the sinistral stock a condition of brain similar to their collateral relatives and ancestors with the result that the speech area in such persons becomes developed in an ectopic position

DISCUSSION

Dr. Hugh T Patrick, Chicago About thirty-three years ago Dr Janeway gave us a sort of rule of thumb in deciding on who was right-handed and who was left-handed that is, that a left-handed person must be a left-handed writing person All other activities are of less importance

Dr. Joseph Collins, New York It is currently reported that the majority of children are left-handed However credible statistics show that only about 5 per cent. of adults are left-handed It is quite possible that some of these cases referred to by Dr Kennedy are exceptions to the rule, which is that the speech area of left-handed individuals is on the right side of the brain If Dr Patrick will substitute "fighting" for "writing," I will agree with him If a man fights with his left hand he is left-handed If a man does the primitive things of life, the things that are necessary in order for him to continue his activities, he is a left-handed individual I am a left-handed individual, and I do all such things as writing, golfing and drawing, with my right hand, but in striking, at least in doing any of the fundamental things, I am left-handed I am inclined to believe that the executive speech area may be vicariously assumed by areas of the brain adjacent to the usual centers, which will explain the majority of cases which are exceptional to the generally established rule

Dr. E B Angell, Rochester, N Y Some years ago a woman of 32 came to necropsy for brain tumor As a child of 5 she had thrombosis of two thirds of the operculum and part of the motor tract of the left side As a child she had been right-handed As the result of the hemiplegia and loss of the power of the right arm, she had to develop the left hand She regained the power of speech At necropsy were found the remains of the destructive process of the old thrombosis The right side corresponding to the right operculum and the right motor hemisphere were much enlarged The cortex was much thickened showing the influence of the change from right to left as she grew up to womanhood

Dr Charles K. Mills, Philadelphia I think Dr Collins is wrong about this thing of the primitive instinct of preservation This does not have to do with the faculty of speech and development of one or the other hemispheres It is the educational acquirements of the brain that have to do with this If you have the inheritance of speech through many generations with the inheritance of right-handedness, the left-handedness in a given generation is then sort of an accidental deviation and it does not have the force that it would have if the left-handedness had been inherited through many generations

Dr J Ramsay Hunt New York I suggest that Dr Collins is both right and wrong that some of his functions he performs with the cortex and some with the globus pallidus Many of the acts, for instance, fighting, must be referable to the automatic mechanism

Dr. Bernard Sachs, New York It is a fact that the majority of children are in the ordinary sense born ambidextrous, and the important thing is that most persons become later in life absolutely right-handed Another point is that in the loss of speech the defect is associated with loss in the two hemispheres about equally, and it is only later in life that the preponderance of the left hemisphere has become well established I believe that there are differnt groups of cases The ordinary child born ambidextrous can be made a right-handed child There are some persons who never can be made right-handed I believe the larger number of persons are right-handed because they are made so by education

Dr. William G Spiller, Philadelphia A child born right-handed was burned in a gas flame and was unable to use the right hand for five or six weeks During that time he used the left hand and, when the bandage was removed continued to use the left hand It required training to induce the child to resume the use of the right hand Undoubtedly if the effort had not been made to train the right hand the child would have continued using the left hand

Dr. Francis X Dercum Philadelphia If my recollection serves me correctly, the right side of the child is larger at birth I think there is more muscle tissue in the right side than the left. It cannot be merely a matter of training, but, if the right hand is injured, the left hand is trained

Dr. Harvey Cushing Boston It may be of interest to call attention to the fact that right-handedness and left-handedness goes back into other forms of life than mammals In certain shells perhaps one out of 10,000 there is a left-handed spiral. Then, too, I believe that parrots are right-handed or right-clawed, as a rule

Dr. Alfred Reginald Allen, Philadelphia The blood supply of the human being and most mammals and vertebrates is not symmetrical with the vertical axis It is probable that the left side of the brain may get a better blood supply than the other side of the brain

Dr Isaac Adler, New York I have been making some cranial measurements and I ran across a peculiar relation of the right hemisphere In the right-handed the right parietal lobe is more prominent than the left In the left-handed person it is not so It is about equal The conclusion is that most left-handed persons, therefore, are ambidextrous

Amyotrophic Lateral Sclerosis

Dr John H W Rhein, Philadelphia The subject of this report was aged 56 The symptoms were atrophy of both arm muscles, including the small muscles of the hand, the flexors and the extensors of the forearm, the biceps, triceps, shoulder girdle, pectoralis and serratus magnus There were fibrillary tremors of both arms Both sides of the tongue were atrophied, the knee and arm jerks were exaggerated, but there was no Babinski sign or spasticity The Wassermann reaction was positive Death occurred about a year after the onset

DISCUSSION

Dr F R Fry, St Louis Some years ago I reported a classical case of Friedreich's ataxia in a girl of 12 or 15 years of age At a later period the mother of this girl, who was then about 42 years of age, developed amyotrophic lateral sclerosis I simply mention that little coincidence as possibly interesting from an etiologic standpoint

Dr Samuel Leopold, Philadelphia I have reported a similar case The patient died within two years I found some round cell infiltration In about one third of these cases, syphilis plays a very important role

Diffuse Endothelioma of Spinal Cord

Dr Peter Bassoe, Chicago, and Dr C L Shields, Salt Lake City The patient, a girl of 16 years, was taken with headache, vomiting and dizziness eight months before death Later there were failing vision, two weeks of strabismus and finally complete blindness Hearing also was lost The optic disks showed secondary atrophy, and the tendon reflexes were lost The spinal fluid showed lymphocytosis and increased albumin There were convulsive seizures during the last two weeks before death The necropsy revealed the unusual condition of a diffuse grayish-white thickening of the pia along the entire cord, most marked posteriorly Histologically, this tumor proved to be endothelioma

(To be continued)

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

American Journal of Anatomy, Philadelphia

May, XIX, No 3, pp 353 506

1 Studies on Mammary Gland in Albino Rat From Birth to Ten Weeks of Age J A Myers, Minneapolis
2 Relation of Coronary and Hepatic Arteries in Common Ganoids C H Danforth, Washington, D C
3 Cell Clusters in Dorsal Aorta of Mammalian Embryos V E Emmel, Washington, D C
4 General Functional Significance of Mitochondria E V Cowdry, Baltimore
5 Embryology of Bird's Lung W A Locy and O Larsell, Chicago

Annals of Surgery, Philadelphia

May, LXIII, No 5, pp 513 640

6 Suggested Operative Steps Dealing With Spontaneous Intracerebral Hemorrhage (Apoplexy) C M Remsen, Atlanta
7 Case of Complete Branchiogenic Fistula C N Dowd, New York
8 Surgical Treatment of Suppurations in Posterior Mediastinum, Report of Two Cases V Gaudiani, New York
9 *Removal of Bullet From Pericardium, Report of Case W E Lower, Cleveland
10 *Case of Intrahepatic Cholelithiasis R Lewisohn, New York
11 *Method of Correcting Stomach Dilatation in Gastroptosis R J Behan, Pittsburgh
12 Etiology of Cysts Connected With Hernial Sacs R W Murray, Liverpool, England
13 Lumbar Hernia, Report of Case E H Goodman and J Speese, Philadelphia
14 *Perforating Ulcer of Foot and Varicose Ulcers of Leg and Their Treatment by Nerve Operations J C J C Smits, Sumatra
15 Plea for Immediate Reduction of Fractures W Darrach, New York
16 Treatment of Injuries in Vicinity of Elbow Joint H M Armitage and G L Armitage, Jr, Chester
17 Fracture Dislocation of Astragalus E F Robinson, Kansas City, Mo
18 *Simplified Preoperative Treatment of Hands and Field of Operation A D Whiting and M A Slocum, Philadelphia
19 Double Uterus and Vagina With New Bloodless Operation (Forceps Pressure) for Correction of Deformity A E Rockey, Portland, Ore
20 Toxicity of Novocain Epinephrin Injected Intravenously J R Eastman, B Erdman and H K Bonn, Indianapolis

9 **Removal of Bullet from Pericardium**—The principal feature in this case to which Lower calls attention is the method of approach, that is, the division of the cartilaginous attachment to the ribs and of the muscles between the ribs, so as to make, by retraction, a "V" exposure By this method ample room is secured and the ribs are not fractured, a circumstance which retards convalescence and makes it much more painful

10 **Intrahepatic Cholelithiasis**—Lewisohn operated on a case of intrahepatic cholelithiasis in which the preoperative diagnosis was acute gangrenous cholecystitis or perforated duodenal ulcer At operation the gallbladder was found distended to about twice its normal size, not tense, its walls were thin and showed no external signs of inflammation The stomach itself was normal and a careful examination of the duodenum failed to show any sign of ulcer or perforation The liver was enlarged to about one and one half times its normal size and showed extensive adhesions between the upper surface and the diaphragm The whole diaphragmatic surface of the liver felt nodular, these areas were hard, some of them whitish in color On the inferior surface of the liver, toward the anterior border, there was a markedly inflamed area belonging to the right lobe, in this part was seen a small abscess cavity, which had perforated and opened into the free peritoneal cavity At the base of the cavity two small black gallstones were felt, the liver tissue was incised, and the stones removed One of the nodules on the right lobe of the liver was incised, after splitting the capsule, a small hard nodule presented itself, about the size of a pea, the mass was whitish and hard (fibrous tissue?) From the center of this mass four small, black gallstones were removed They were exactly like those which had been found on the under surface of the liver The gallbladder contained about 30 c c of a turbid fluid and one-half dozen yellowish gallstones The mucosa was only slightly inflamed and not thickened

11 **Correcting Stomach Dilatation in *Gastroptosis***—The method devised by Behan is as follows The stomach is exposed and a flap of serosa is freed from its anterior surface The flap (½ inch wide) extends from the lesser curvature downward obliquely toward the greater curvature and fundus for about 3 to 4 inches This flap is then inserted in a reversed direction through two flaps raised from the subjacent muscularis and is sutured in place The raw surface is puckered in and the wound closed The stomach in one instance was removed and examined after this operation It was remarkably decreased in size At the area of operation there was a very long ruga which projected into the lumen of the stomach After the plication the muscle contracted and threw the mucosa into deeper folds To sight and touch the gastric muscle was absolutely normal Behan has used this method on two patients and so far the results have been very satisfactory

14 **Perforating and Varicose Ulcers of Leg**—The only modern surgical method of treatment in Smits' opinion that reckons with etiology is local treatment of the sore combined with stretching or laceration of the nerve, in the region in which this sore is situated In the twenty-five cases of perforating ulcer of the foot cited by Smits the mere local surgical treatment was shown to be useless in all these cases,

even when combined with an absolute rest cure The same surgical treatment combined with a nerve operation, whether executed once or repeatedly, always led to cure Eighteen cases of varicose ulcer similarly treated are cited Locally he applied a liquefied medicated gelatin made as follows Dissolve in a water bath 20 parts of gelatin in 40 parts of water To this add 10 parts of glycerin, mix with 15 parts zinc oxid previously ground up with 15 parts glycerin and add water enough to make 100 parts Smits spreads a thick layer of this liquefied medicated gelatin over the leg and covers this while still wet with a thin layer of cellulose wadding which immediately sticks and forms an immovable dressing Over the layer of cellulose wadding a bandage of well starched gauze is placed The patient remains in bed until the dressing is thoroughly dry

18 **Preoperative Treatment of Hands**—As a result of their investigations Whiting and Slocum conclude that a solution consisting of acetone alcohol and one of the coal tar disinfectants of a high phenol coefficient is more efficient than any other agent used for skin sterilization In such a solution the acetone (dimethylketone) acts as a solvent of the fatty or oily material of the skin and thus aids in exposing the bacteria to the germicides The alcohol acts as a solvent it has the power to penetrate into the cracks and crevices of the skin through its ability to decompose and remove small particles of air that may be present it is germicidal in solutions as weak as 30 per cent With its strongest germicidal powers in solutions ranging from 60 to 70 per cent it also acts as a good vehicle The coal tar disinfectant that may be used acts simply as a powerful germicide destroying all bacteria with which it comes in contact in a length of time varying with its coefficient and the degree of dilution The advantages of such a solution are many Patients do not complain of any irritation following its use although it causes a burning sensation when used on the scrotum It does not stain the skin It reduces to a minimum the time consumed in preparing the field of operation and its method of application is the simplest It may be used on a wet or dry skin for emergencies or for cases in which the consumption of time in preparing the patient is not of great moment There is no exfoliation of the skin as is seen after the use of iodin nor is there any blistering It may replace all other solutions in sterilizing the hands although its continuous use causes some irritation in some instances, in others no effect is noticed others say the application of the solution gives rise to a decided feeling of warmth The solution may be used repeatedly any collected detritus being removed by filtration The authors suggest that a solution consisting of 35 per cent acetone, 1 or 2 per cent of a coal tar disinfectant of a high coefficient with enough alcohol to make 100 per cent would answer the purpose. The method of application consists in rubbing the field of operation for two minutes with a piece of gauze saturated with the solution after either a wet or dry shave A warm cleansing tub bath is always advisable when not contraindicated

Archives of Internal Medicine, Chicago

May XVII No 5 pp 591 710

21 *Case of Multiple Abscesses of Brain in Infancy J B Holmes Baltimore
22 *Studies on Pineal Gland Experimental Observations. G Horrax Boston
23 *Id Clinical Observations. G Horrax Boston
24 Adjustment of Pressures in Induced Pneumothorax. C D Parfitt Gravenhurst Ont
25 *Sino Auricular Block Due to Tobacco Poisoning Report of Cases S Neuhof New York.
26 Studies of Heart s Functional Capacity as Estimated by Circulatory Reaction to Graduated Work. T B Barringer Jr New York
27 Present Status of Magnesium Sulphate in Treatment of Tetanus H E Robertson Minneapolis
28 *Basal Metabolism in Obesity J H Means Boston
29 *The Typhoidin Reaction C R. Austrian and A. L. Bloomfield Baltimore

21 **Multiple Abscesses of Brain in Infancy**—The case reported by Holmes represents a rare condition multiple large abscesses in the hemisphere of an infant under 2 years of age It ran its course under the picture of chronic internal hydrocephalus That chronic internal hydrocephalus of the communicating type was not present was shown clinically by the phenolsulphonephthalein test The condition found at necropsy resembled closely that of multiple pyogenic abscesses of the left hemisphere It was not possible however, wholly to exclude multiple tubercles which had undergone puriform softening Microscopically, the case is noteworthy in the unusual number of Gluge's corpuscles that are present

22 **Experimental Observations on Pineal Gland**—The results of an experimental study are given by Horrax He found that total experimental pinealectomy is possible in guinea-pigs and rats Pinealectomized male guinea-pigs show a hastened development of the sexual organs, manifested before maturity by a relative increase in size and weight both of the testes and seminal vesicles, over control pigs of the same litter Histologically the testes and seminal vesicles of these animals if taken before the age of sexual maturity show a more advanced physiologic state than their controls The pinealectomized females appear to show a tendency to breed earlier than controls of the same age and weight For several reasons young rats are likely to prove better subjects for experimental pinealectomy than young guinea-pigs and some evidence of hastened maturity has been obtained in this species

23 **Clinical Observations on Pineal Gland**—Clinical study of three cases of supposed pineal tumor demonstrated that tumors of the pineal gland in children occurring before the age of puberty usually give rise to a syndrome characterized by precocious adolescence. In the first case there were no positive means of knowing whether or not the pineal is the organ mainly at fault The history and findings, however, are suggestive and conform to the symptom complex of Frankl-Hochwart except that the patient was a girl 11 years of age Adiposity though not great, was present to a definite degree this with the other points making the case very similar to Marburg s There was an increase in the eosinophilic leukocytes The second patient was a boy 7½ years of age In this instance Horrax was unable to say what part the pineal may or may not be playing in the syndrome Clinically however the symptom complex was similar to that characterizing a pineal lesion but without adiposity The sexual side of the picture is decidedly in the foreground There has been little intellectual attainment the latter sphere having been greatly limited by the boy s environment In the third case the lesion was certified in full The patient was a boy 12 years of age There was a precocious adolescence intracranial symptoms with diagnosis of tuberculous meningitis xanthochromia Necropsy revealed struma of the pineal gland A striking feature of the tumor as a whole was the great number of lymphoid cells it contained These were present both in large masses grouped together and also as scattered elements throughout the growth without definite arrangement This enormous development of lymphoid tissue in a patient 12 years of age brings out the possibility of associated lesions elsewhere in the body especially in connection with the thymus and lymph glands The limited necropsy prevented studies of these tissues

25 **Sino-Auricular Block Due to Tobacco Poisoning**—A study of the history and clinical course of the two cases cited by Neuhof showed that the two distinct types of arrhythmia sino auricular block and ventricular extrasystoles were apparently caused by two different factors, the former by tobacco the latter probably by myocarditis and nephritis The sino-auricular block disappeared very soon after smoking was stopped the extrasystoles only when compensation was fully restored The cases seem to substantiate in a degree the results of animal experimentation In Case 2 the extrasystoles were the result of decompensation The sino-auricular block represented the effects of nicotin poisoning on the vagus alone Patient 1 had no organic disease. The moderate acceleration interspersed with irregularly occurring sino-auricular block was apparently a clinical prototype of the two opposed experimental effects of the tobacco alkaloid on the vagus and accelerator

28 **Basal Metabolism in Obesity**—According to Means the majority of obese subjects show no alteration in the basal

metabolism, as expressed in terms of their surface area, even though the obesity is of a most extreme type Occasionally a slight reduction occurs and in such cases clinical evidence of disturbed internal secretion is present

29 **Typhoidin Reaction**—The typhoidin reaction carried out by Austrian and Bloomfield in sixty-six individuals failed to furnish data by means of which it was possible to differentiate between those who had neither had typhoid nor received prophylactic vaccination and those who had either had the disease or had been artificially immunized against it

Boston Medical and Surgical Journal

May 25 CLXXIV, No 21, pp 759 774

30 *Pediatrics as Specialty in Smaller Cities* A C Eastman, Springfield
31 Management of Gonorrhea J D Barney, Boston
32 Ophthalmia Neonatorum G H Thompson, North Adams
33 Ringworm in Children E L Oliver, Boston
34 Results of Open Air Treatment of Pneumonia in Children A R Cunningham, Boston
35 Tuberculous Infection in Children H W Dana, Boston

Cleveland Medical Journal

April XV, No 4 pp 215 314

36 Treatment of Syphilis During First Six Months After Infection W T Corlett Cleveland
37 *Treatment of Peritonitis* G W Crile, Cleveland
38 Effect of Vitamines on Body Growth M D Shie, Cleveland
39 Intraspinous Treatment of Neurosyphilis With Standardized Salvarsanized Serum W C Stoner, Cleveland
40 Pedicle Clamp Specially Designed for Use in Nephrectomy W E *Lower, Cleveland*
41 Congenital Club Foot G I Bauman, Cleveland
42 *Compressed Air (Caisson) Disease Discussion of Etiology From Standpoint of Physical Laws T S Keyser, Cleveland
43 Importance of Roentgen Ray Examination in Clinical Diagnosis, Report of Case J D Osmond, Cleveland
44 *Trouble, Double, Double, Pathologic and Professional* M J Lichty, Cleveland

42 **Compressed Air (Caisson) Disease**—A typical case of caisson disease eventuating in recovery is reported by Keyser It is shown that the various congestion theories are quite fully refuted by a simple application of certain fundamental laws of physics, while the gaseous theory is fully supported by these same laws The characteristic pains and rigidity are considered to be due largely to the irritative nature of the cord lesions The relief of urinary retention by the administration of pituitary extract is of special importance for the reason that cystitis is a most serious complication in the disease The onset of recovery following lumbar puncture is an interesting observation in this case

Indiana State Medical Association Journal, Fort Wayne

May IX No 5, pp 179 222

45 *Surgical Diseases of Stomach* M F Porter Fort Wayne
46 *Some Points in Early Physical Diagnosis of Pulmonary Tuberculosis A C Kimberlin, Indianapolis
47 **Thoracoplasty for Chronic Empyema* W D Gatch, Indianapolis
48 Value of Renal Functional Test in Surgery T M Jones, Anderson
49 *Some Surgical Disorders of Upper End of Femur B P Weaver, Fort Wayne

46, 47 and 49 Abstracted in The Journal, Nov 20, 1915, pp 1846 and 1848

Journal-Lancet, Minneapolis

May 15, XXXVI No 10 pp 279 308

50 Embryology and Medicine C M Jackson, Minneapolis
51 Extra Uterine Pregnancy With Especial Reference to Early Diagnosis, Report of Seven Cases D L Scanlon, Volga, S D
52 Study of Abdominal Wall in Its Relation to Hernia E R Hare, Minneapolis
53 Present Status of Immunology L D Bristol, University, N D

Journal of Medical Research, Boston

May, XXXIV, No 2, pp 131 272

54 *Antagonistic Action of Negative Serum on Wassermann Reaction A W Sellards and G R Minot, Boston
55 Histopathology of Intestines in Young Chicks Infected With Bacterium Pullorum G E Gage and J F Martin, Boston
56 *Agglutination Reaction With Serum Derived From *Human Cases* of Leprosy and From Experimental Animal on Various Members of Acid Fast Group W H Harris and J A Lanford, New Orleans
57 *Simplified Method of Producing Potent Precipitin Serum W V Smith, Louisville, Ky
58 Pathologic Study of Naturally Acquired Chronic Nephropathy of Dog W deB MacNider, Chapel Hill, N C
59 *Pathologic and Physiologic* Study of Naturally Nephropathic Kidney of Dog, Rendered Acutely Nephropathic *by Uranium or by* Anesthetic W deB MacNider, Chapel Hill, N C
60 **Blood Lipase in Health and Disease* Z Sagal, New York.
61 Toxic Lesions of Suprarenal Gland and Their Repair G S Graham, Boston
62 *Study of Acidosis *in Three Normal* Subjects, With Incidental Observations on Action of Alcohol as Antiketogenic Agent. *H L Higgins, F W Peabody and R Fitz, Boston*

54 **Antagonistic Action of Negative Serum on Wassermann Reaction**—In the clinical application of the Wassermann reaction it is generally agreed that there are a relatively large number of cases of syphilitic infection especially in the tertiary stage, in which the test is negative It would evidently be desirable to secure some method in which a negative reaction would justify the exclusion of syphilis The possibility suggests itself to Sellards and Minot that syphilis could be excluded if the serum under examination *gives strong hemolysis in the presence of a trace of positive* serum Indeed, when no trace of hemolysis occurs under these circumstances it is desirable to search especially carefully for evidences of syphilis While it is certainly not desirable to increase the sensitiveness of the Wassermann reaction by reenforcing the antigen any further or by increasing the amount of patient's serum which is used, it is still possible that the addition of a trace of positive serum to a negative one might act in a very different direction and, by neutralizing the antagonistic property of normal serum, bring out obscure or weak reactions This would be of *interest, not in the routine Wassermann test, but only for* purposes of experimental study

56 **Agglutination Reaction with Leprosy Serum.**—The agglutinin present in the serum of the human subject affected with leprosy is usually low in titer and inconstant in its action The employment of this procedure, therefore, has proved of no avail in serving to authenticate any of the various cultures isolated from the leprous lesion of the human as the Hansen bacillus The serums derived from rabbits inoculated with various bacillary antigens yield agglutinins likewise inconstant in amount and erratic in their action Serums derived from these inoculated animals do not serve to differentiate the various species employed in these experiments, but suggest a group relationship Until some further refinement in these procedures is devised, Harris and Lanford assert that but little reliability can be placed on this type of test as a means of identification of any culture isolated from the lesion of leprosy as the bacillus of Hansen.

57 **Method of Producing Potent *Precipitin Serum***—Smith points out that in many places human blood, or human blood serum, cannot be readily obtained When a quantity of blood can be gotten at once, such as is present in a placenta, it may be precipitated with ammonium sulphate and kept on hand for a long time, at least nine months, and no doubt indefinitely The precipitated protein is capable of producing a potent precipitin rabbit serum, when injected intraperitoneally The danger to the animal to be injected is reduced by using this precipitate, as a smaller quantity of material is injected and the precipitate thus prepared is sterile or nearly so The precipitate can be kept on hand and be readily used in case of emergency

60 **Blood Lipase in Health and Disease**—The serum of patients suffering from bacterial diseases, Sagal claims, show a slight increase in enzyme activity, while the serum obtained from sufferers of diseases of nonbacterial origin show a slight depression Bile stained serum and the serum from hepatic cirrhosis show marked decrease in enzyme activity Lipase activity gradually decreases with increasing age Variation of lipase activity in diseased conditions, as shown by the hydrolysis of ethyl butyrate, are so small as to be devoid of diagnostic or prognostic value

62 **Study of Acidosis, Action of Alcohol as *Antiketogenic* Agent.**—In three healthy subjects studied by Higgins, Pea-

body and Fitz a carbohydrate free diet caused the development of varying degrees of acidosis The acidosis was shown by a lowered CO tension of the alveolar air, by an increased urinary excretion of ammonia nitrogen and of acetone bodies and by the increase titratable acidity of the urine The acidosis was accompanied by subjective sensations of malaise, an increased oxygen consumption, a negative nitrogen balance increased pulse rate and increased ventilation Alcohol given to the subjects on this diet in dosage comparable to that used for clinical purposes did not stop the progress of the acidosis or show any antiketogenic action Coincidental with its administration there was further increase in the oxygen consumption, and in the disagreeable subjective symptoms

Journal of Nervous and Mental Disease, Lancaster, Pa

May XLIII No 5 pp 393-488

63 *Tabes Dorsalis Pathologic and Clinical Study of Two Hundred and Fifty Cases B Lucke Philadelphia
64 Hydromyelia and Hydroencephalia Report of Case A Gordon Philadelphia
65 *Abnormal Relation Between Liver and Brain Weights in Forty Two Cases of Epilepsy D A Thom Palmer Mass
66 Case of Atypical Multiple Sclerosis With Bulbar Paralysis S Krumholz Chicago
67 Case of Peripheral Neuritis With Korsakow's Symptom Complex A A Wilson Washington, D C

63 **Tabes Dorsalis**—The symptoms and pathologic findings of 250 cases of tabes dorsalis are analyzed by Lucke Two hundred and seven or 82 8 per cent, are white males, 29 or 11 6 per cent are white females, 13 or 5 2 per cent are black males, 1 or 0 4 per cent is a negress Only 141 or 56 4 per cent admitted syphilis The average period of years was 15 34 which elapsed between primary sore and beginning tabetic symptoms There were no cases of so-called juvenile tabes Lancinating pains somewhere in the body, lead the percentages (31 2) of the initial symptoms and occupy first place in the total (71 6) In the 169 cases (67 6) which showed sphincter disturbances the rectal sphincter was affected in 70 and the vesical sphincter was affected in 143 Girdle sensation was present in 31.2 per cent Loss of sexual power was noted in 11.2 per cent Anosmia and deafness were each observed in 2 cases or 0.8 per cent Insanity, other than paresis in locomotor ataxia, occurred in 6 cases or 2 4 per cent

Knee jerks were absent in 90 per cent Romberg's phenomenon was present in 241 cases or 96 5 per cent Arthropathies occurred in 23 cases or 9.2 per cent, in 7 cases there was bilateral arthropathies The joints affected were right knee joint in 9 cases left knee joint in 5 cases, both knee joints in 4 cases right knee joint and metatarsophalangeal joints in 1 case both ankle joints in 2 cases, left ankle joint in 1 case In one case Charcot joint (knee) occurred as the first symptom of tabes Spontaneous fracture occurred in but one case, a woman who suffered about ten years after the onset symptoms, a fracture of the femur This fracture was the result of a slight fall The fracture caused but little, if any, pain At the present time, six years after fracture union has not taken place Malperforant was found in 8 cases or 3.2 per cent. The perforant ulcer always occurred on the foot Footdrop occurred in 9 cases or 3 6 per cent. Hemiplegia and tabes occurred in 6 cases or 2 4 per cent.

Visual disturbances occurred in 109 cases or 43 6 per cent. of these, failing eye sight occurred in 63 cases or 25.2 per cent. diplopia occurred in 46 cases or 18 4 per cent, optic atrophy occurred in 37 cases or 16 0 per cent, nystagmus occurred in 23 cases or 9.2 per cent It is of interest to note that in one of two blind cases Romberg's sign is not so great with eyes open while he promptly will sway and even fall to the ground if he closes his eyes The other case has a marked Romberg's which is more decided with eyes closed Typical Argyll Robertson pupil occurred in 200 cases or 80 per cent, sluggish reactions or no reactions occurred in 32 cases or 12 8 per cent., normal reactions occurred in 18 cases or 7.2 per cent, unequal pupils occurred in 86 cases or 33 6 per cent, irregular pupils occurred in 34 cases or 13 6 per cent, unequal and irregular pupils occurred in 20 cases or 8 per cent, ptosis of both eyelids occurred in 17 cases or 6 8 per cent, ptosis of left eyelid occurred in 16 cases or 6 4 per cent, ptosis of right eyelid occurred in 4 cases or 1 6 per cent, and paresis of eye muscles occurred in 30 cases or 12 0 per cent

65 **Abnormal Liver and Brain Weights**—In twenty-six (62 per cent), in this series of forty-two cases studied by Thom, the brain outweighed the liver Of the sixteen cases in which the relative liver and brain weight was normal, in only two were the weights of the liver and brain both within the normal limits in the same case namely, forty of the forty-two cases studied revealed either an abnormal relation between the liver and brain weights, or that one of the organs was of abnormal weight In some cases both conditions were true The most common gross abnormalities named in order of their frequency were as follows atrophy of liver, atrophy of brain overweight of brain (probably due to edema or hydrocephalus), hypertrophy of liver

Journal of Pharmacology and Experimental Therapeutics, Baltimore

May VIII No 5 pp 205 271

68 *Liberation of Epinephrin From Suprarenal Glands by Stimulation of Splanchnic Nerves and by Massage G N Stewart, J M Rogoff and F S Gibson Cleveland
69 *Rôle of Liver in Acute Polycythemia Relation of Plasma Volume to Number of Erythrocytes Per Unit Volume of Blood P D Lamson and N M Keith Baltimore
70 *Action of Certain Volatile Oils on Isolated Intestinal Segments A L. Muirhead and H F Gerald Omaha
71 *Pharmacology of Ureter Action of Drugs Affecting Sacral Autonomics D I Macht, Baltimore.

68 **Liberation of Epinephrin from Suprarenal Glands**—It is shown by the authors that the response of the denervated eye to stimulation of the peripheral end of the splanchnic nerves is due solely to the passage of a substance in the blood stream from the suprarenals to the eyeball When the venous path is blocked the response fails, but appears on releasing the block When the heart is stopped by stimulation of the peripheral end of the vagus, stimulation of the splanchnics produces no effect on the eye. But on allowing the heart to beat again, the eye response occurs at approximately the same time from the moment of reestablishment of the circulation, as the time interval between stimulation of the splanchnics and the response with the circulation going on normally When the circulation is slowed without being stopped, the interval between the beginning of stimulation of the splanchnics and the appearance of the eye response is correspondingly increased When epinephrin is injected into the left renal vein, or into the central end of the femoral vein, in suitable amount to produce an eye response approximately equal to that produced by a given stimulation of the splanchnics the interval of time after which the response follows is sensibly the same for epinephrin injection as for splanchnic stimulation When the aorta is clamped and the splanchnic then stimulated, a response may be obtained in the eye while the clamp is still on, or only after its removal, or both during the application and after removal of the clamp

Circulation time measurements show that there is always more than sufficient time for a substance to have been carried in the blood from the suprarenals to the eye before the appearance of the eye reactions The minimum period of stimulation of the splanchnics needed to liberate sufficient epinephrin to elicit a response in the denervated eye is very brief (a fraction of a second) Massage of one or both suprarenals causes definite eye response in an animal in which stimulation of the splanchnics has been causing it, and at the same interval of time. When, after repeated excitations of a splanchnic nerve, the reaction on the eye ceases to be obtained it can still in general be elicited by massage of the corresponding suprarenal But this reaction is soon exhausted

69 **Rôle of Liver in Acute Polycythemia**—It has been demonstrated by Lamson and Keith that when the hepatic artery is ligated, the intravenous injection of epinephrin causes a decrease in plasma volume, without an increase in the number of erythrocytes per unit volume of blood Further plasma volume and the number of erythrocytes per unit volume of blood may vary independently of one another

70 **Action of Volatile Oils on Intestinal Segments**—The following oils were studied by Muirhead and Gerald pennyroyal, tansy, wormwood, turpentine, rue, anise, savin and thymol A number of these oils produce quite marked stimulation of isolated intestinal segments when applied in dilutions of 1 to 50,000 to 1 to 25,000 This is especially true of oil of anise, oil of turpentine and oil of wormwood All of the oils produced relaxation of intestinal segments when applied in dilutions of 1 to 5,000 to 1 to 10,000

71 **Action of Drugs Affecting Sacral Autonomics**—Macht found that pilocarpin, physostygmin, muscarin, pseudomuscarin and cholin, in suitable doses all stimulate the rate and force of the ureteral contractions and increase the tonus of the excised ureter Large doses of pilocarpin may, however, secondarily paralyze that organ The pressor action of pilocarpin, physostygmin and muscarin, is not inhibited by previous exhibition of ergotoxin Atropin in sufficient (rather large) doses, inhibits the contractions and decreases the tonicity of the ureter Small doses of atropin may produce, though not invariably, a primary stimulation of the ureteral contractions The same effects as in the ureteral preparations described by the author, were noted in rabbits by observing the ureters in situ, after administration of pilocarpin, physostygmin and atropin The behavior of the ureter toward the drugs studied, Macht says, gives pharmacologic proof of its innervation by the sacral autonomics, and is also of some practical interest

Modern Hospital, St Louis

May VI, No 5 pp 311 392

72 New York Orthopedic Hospital Has New Home L M Franklin, New York
73 Is Mechanical Ventilation in Hospitals Success? F Sutton, New York
74 Orange Memorial Hospital—Analysis of Statistical Data F L Hoffman, Newark, N J
75 Cambridge Hospital's New Home and Fine Organization C N Cogswell, Boston
76 Some Convenient Accessories for Roentgenotherapy E Blaine, Chicago
77 Coffee Substitutes and Hygienic Coffees J P Street, New Haven, Conn
78 Architecture of A D Price Memorial Hospital, Harrodsburg, Ky H E Hannaford, Cincinnati
79 Intern's Side of Hospital Service G K Dickinson, Jersey City, N J
80 Residence Made Over Into Good Hospital J R Kingsley, Three Rivers, Mich

New York Medical Journal

May 20, CII, No 21 pp 961 1008

81 Tonsilloscope T R French, Brooklyn
82 Ineffective Appendicectomies R T Morris, New York
83 Specific Therapy in Certain Acute Infectious Diseases F J Dever, Philadelphia
84 Potassium Iodid Poisoning R W Wilcox, New York
85 Curatelle and Modern Psychiatry (To be continued) G W Jacoby, New York
86 Cancer of Breast J E Jennings, New York
87 Gas Gangrene E K Tullidge, Philadelphia
88 Collecting Blood by Venepuncture L Thompson, Hot Springs, Ark
89 Concealed Measles R Opdyke, New York
90 Pathologist, Family and Family Physician M T Hansell, New York

Providence Medical Journal

May XVII, No 3 pp 125 172

91 Importance of Anaphylaxis in Clinical Medicine G Blumer, New Haven, Conn
92 Intraspinal Treatment of General Paresis and Tabes Dorsalis, Report of Cases F E Webb, Providence
93 Laryngeal Paralysis in Tabes I M Adams, Providence
94 Primary Sarcoma of Sclerocorneal Juncture Treated With Jequirity V L Raia, Providence

Southwest Journal of Medicine and Surgery, El Reno, Okla

May XXIV, No 5, pp 129 160

95 Acute and Subacute Metastases A L Blesh, Oklahoma City
96 Treatment of Nevus J L McDermott, Kansas City, Mo
97 Syphilis of Cardiovascular System L J Moorman, Oklahoma City
98 Trachoma D W White and P C White, Tulsa
99 Cerebral Syphilis J W Duke, Guthrie
100 Syphilis of Nervous System A D Young, Oklahoma City

FOREIGN

Titles marked with an asterisk (*) are abstracted below Single case reports and trials of new drugs are usually omitted

British Journal of Children's Diseases, London

May, XIII, No 149 pp 129 160

1 Hearing Tests in School Children M Yearsley
2 *Nephritis Without Albuminuria J P Parkinson
3 Case of Dyspituitarism in Girl, Aged Fifteen Years S Stephenson
4 Retrospect of Otology, 1915 M Yearsley

2 **Nephritis Without Albuminuria**—The case cited by Parkinson began as pneumonia in a boy of 3½ years of age A few days after his recovery slight edema appeared on the face, and the next day the face was *extremely swollen*, as also were the arms, hands, feet and legs, and the wall of the trunk There was no evidence of fluid in the chest or abdomen From now the urine was examined daily, but no albumin was ever found Microscopically a few granular and hyalin casts and an odd red corpuscle or two were found on centrifugalizing The amount of urine passed daily was normal, and fairly abundant urates were deposited on standing On the third day the patient got very stupid, but not exactly drowsy The blood pressure on this date was 90 mm The edema began to disappear after three or four days under hot air baths and saline purgatives and after ten days all casts and blood had disappeared from the urine, only a few epithelial cells from the bladder being seen on centrifugalizing Parkinson believes this child to have had an attack of acute nephritis following but not due to pneumonia causing edema and the presence of casts and blood cells in the urine, but without albuminuria

British Medical Journal, London

May 6, I, No 2888 pp 641 676

5 Suture of Nerves and Alternative Methods of Treatment by Transplantation of Tendon (To be continued) R. Jones
6 *Case of Congenital Atresia of Duodenum Treated Successfully by Operation N P Ernst
7 Some Hints on Time Saving in Operations E Harrison.
8 Dressings Used in Casualty Clearing Station A Don
9 Case of Acute Urinary Infection With Paratyphoid B Bacillus C Worster Drought and A M Kennedy
10 Case of Ganglioneuroma of Sympathetic D R Adams
11 Therapeutic Value of Hypochlorous Acid R F Cordova
12 Simple Method for Intravenous Injection of Eusol J M Graham

6 **Congenital Atresia of Duodenum**—Ernst's patient was only 12 months old From the first the child always vomited after suckling On the third day it took the breast more actively than at first, but two or three hours later it began to vomit, with almost explosive violence Very little urine was passed, and the motions were limited to a small amount of typical meconium, without a particle of digested milk The child was treated both with castor oil and enemas Rectal examination revealed no abnormal condition of the bowels The child lost weight rapidly Ernst made a diagnosis of high-seated intestinal stenosis or atresia and suggested an operation On opening the peritoneum the dilated stomach protruded into the wound, and was traced along the dilated pylorus into the duodenum, which was uniformly of about two fingerbreadths in width, so far as it could be traced to the upper side of the transverse mesocolon But below the colon, where the intestine reappeared, at the flexura duodenojejunalis, it was seen to have collapsed to the caliber of an ordinary pencil, about 8 millimeters in diameter The remaining part of the small intestine was normal Ernst made a duodeno entero-anterior anastomosis—that is to say, a coil of small intestine about 4 inches below the flexura duodenojejunalis was drawn up in front of the transverse colon, and united to the duodenum about the junction of the pars superior and pars descendens Anastomosis to the lower part of the pars descendens was impracticable The child made a complete recovery and is now alive and well

Edinburgh Medical Journal

May, XVI No 5, pp 337 416

13 Crossed Aphasia B Bramwell
14 Roentgenography of Thorax in Children J S Fowler

15 Enucleation of Eyeball Under Local Anesthesia H M Traquair
16 Physicians in Zola s History of Rougon Macquart Family J B Adams
17 Case of Congenital Cutaneous Outgrowth D M Creig

Glasgow Medical Journal

May LXXXV No 5 pp 313 375

18 Prevention and Treatment of Some Obscure Conditions Complicating Convalescence After Gastro Enterostomy A MacLennan
19 *Subacute Anterior Poliomyelitis A W Harrington and J H Teacher

19 **Subacute Anterior Poliomyelitis**—The patient whose case is cited by Harrington and Teacher was an elderly woman who presented a flaccid paralysis beginning in the peroneal group extending rapidly to the upper extremities, and finally involving the muscles of respiration The paralysis appeared first and later atrophy of the affected muscles became marked No fibrillary tremors were observed Repeated and thorough examinations showed that there were no disturbances of sensation beyond occasional shooting pains The sphincters were not affected The reflexes were early abolished An examination of the electrical reactions on admission showed reaction of degeneration fully developed in the affected muscles of the left leg and incomplete in the right leg The Wassermann reaction was not ascertained, but there was no history or suggestion of syphilis The patient died from involvement of the diaphragm and intercostal muscles the duration of the illness being probably less than a year Clinically the diagnosis lay between peripheral neuritis and anterior poliomyelitis The pathologic report was wholly in support of the latter diagnosis The principal features were the advanced degenerative changes in the ganglion cells of the grey matter of the spinal cord, and to a less degree in the medulla and pons and the absence of tract degenerations and peripheral neuritis A second patient, a woman of 48 years exhibited a flaccid paralysis beginning in the peroneal group of muscles, rapidly extending to the upper extremities, and finally involving the muscles of respiration The paralysis preceded the atrophy Reaction of degeneration was present but there were no fibrillary tremors There was no disturbance of sensation beyond occasional shooting pains in the right leg The duration of the illness was less than one year The diagnosis was indicated by the somewhat selective nature of the palsy, by the distinct atrophy which followed and by the complete absence of sensory disturbance Clinically, the case could be definitely distinguished from progressive muscular atrophy and peripheral neuritis Pathologically there was degeneration of the lower motor neurones The case probably should be regarded as a subacute poliomyelitis

Journal of Tropical Medicine and Hygiene, London

May 1 XIX No 9 pp 101 116

20 Epidemic Cerebrospinal Meningitis as Seen in Anglo Egyptian Sudan A. J Chalmers and W R O Farrell

Lancet, London

May 6 I No 4836 pp 913 980

21 Infantile Mortality and Relative Practical Value of Measures Directed to Its Prevention S G Moore
22 Some Factors in Pathology of Gas Gangrene. W d Este Emery
23 Visual Standards Used in Medical Examination of Recruits in British Army and Continental Armies J V Paterson and H M Traquair
24 *Spinal Anesthesia With Special Reference to Use of Novocain C C Holman
25 Clinical Manifestations of Gas in Military Mines C E Sundell
26 Cases of Foreign Bodies in Bladder Resulting from Gunshot Wounds G G Turner
27 *Ulcerative Stomatitis K Goadby

24 **Novocain in Spinal Anesthesia.**—Holman emphasizes the fact that spinal anesthesia is a method which must be employed with scrupulous care and attention to detail He says that it is more suitable for use in hospitals in which the nursing staff is familiar with the technic and after-treatment, than it is for casual operations in private practice Like many valuable operations it has sometimes obtained a bad reputation through improper performance

27 **Ulcerative Stomatitis**—Ulcerative stomatitis, often preceded by or accompanied with sore throat, is appearing sporadically among the troops in France as well as in some of the English camps A smear preparation made by Goadby from the gums, cheeks or throat and stained by Giemsa's method showed innumerable bacteria of two morphologic forms (1) *Bacillus fusiformis* and (2) spirochetes both gram-negative Stained by Leishman's stain or Giemsa the fusiform bacilli were seen to be diplobacilli 6 to 7 microns in length, with pointed extremities, the thickened ends being in apposition with a small clear area between somewhat resembling the sheath form of the *Bacillus diphtheriae* The organism is longer and larger than the diphtheria bacillus and is slightly curved, plasmolysis is common The second or spirillum form closely resembles the spirillum of relapsing fever as seen in blood films, it is wavy in outline irregular in form and without the characteristic regular 'screw" form seen in *Spirochaeta pallida* Many of the organisms show unmistakable spiral form, the turns' of the thread are but four to six in number, the ends may be pointed, but the organism is usually about the same diameter throughout, in hanging-drop preparations from the tissue it is not motile The organism is an obligatory anaerobe and is also serophile

Quarterly Journal of Medicine, London

April IX No 35 pp 165 256

28 *Experimental Investigation on Diarrhea and Vomiting of Children E Mellanby
29 *Quantitative Determination of Amylase in Blood Serum and Urine as Aid to Diagnosis P Stocks
30 Urticaria Tuberosa of Willan Report of Cases J A Nixon

28 **Diarrhea and Vomiting of Children**—Some years ago an extremely active and toxic substance known as beta-imidazolylethylamin (throughout this paper called β-1) from ergot It is derived from histidin a harmless substance by the removal of carbon dioxid The experimental portion of Mellanby's work was carried out on the assumption that β-1 is one of the most important factors in epidemic diarrhea and vomiting Various hypotheses involving β-1 as the cause of such symptoms can be formulated 1 That in diarrhea and vomiting there is excessive production of β-1 in the intestine due either to (*a*) a changed or increased bacterial flora, (*b*) a changed chemical or physical condition which prevents the absorption of histidin of the food and allows a subsequent increased production of β-1, or to (*c*) a changed condition which allows bacteria acting on histidin to produce a relatively large amount of β-1 rather than innocuous products (such an innocuous product might be beta-imidazolylacetic acid) 2 That in diarrhea and vomiting there may or may not be an increase of β-1, but the β-1, present in the alimentary canal and mucous membrane becomes active in some way and is absorbed into the blood stream at a time when the animal is incapable of resisting its toxic action and rendering it innocuous

The most important results obtained by Mellanby in this research from a practical point of view are as follows First, as regards the absorption of toxins like β-1 from the intestine There is a marked delay in the absorption of toxic substances normally in the intestine when animals are injected with large quantities of fluid Water in the intestine delays the absorption of toxic substances During the digestion of foodstuffs generally, meat milk sugar and fat, there is a delay in the absorption of toxic substances The presence of bile in the intestine delays the absorption of toxic substances Magnesium sulphate of a concentration of 2 per cent or over delays the absorption of toxic substances from the intestine A less concentration of magnesium sulphate has no effect Morphin below the point of being a serious menace to the respiratory center, has no effect on the absorption of toxic substances Secondly, as regards the resisting power of the animal toward absorbed toxic substances The resistance of an animal against toxic substances is very greatly increased by the injection of fluid into the circulation An animal with a diminished amount of fluid and particularly after the loss of a small amount of blood, has little power of resistance against toxic substances An animal s resistance is greatly increased after it has absorbed from the intestine food, and more particularly meat During the digestion of fat, toxic substances absorbed from the intestine have a diminished action, at least for some hours Clinically, a child suffering from diarrhea and vomiting owing to loss of fluid, loss of bile salts, with an empty intestine and in a starving condition, is in an ideal position for allowing toxic substances normally present in the alimentary canal and mucous membrane to be rapidly absorbed and have their full toxic action The association of this disease with a high atmospheric temperature in an epidemic form is to be explained largely by the additional loss of fluid due to evaporation of water, whereby the child keeps down its body temperature Hence, of all treatment in this condition, the one thing essential is to get the volume of body fluids of the child back to normal or above normal by intravenous or subcutaneous injection of saline solution

29 **Amylase in Blood Serum and Urine**—Amylolytic ferment is present in definite quantity 6 6 to 8 units according to Stocks in the blood serum and urine of all healthy individuals, and has also been found in all the body fluids examined The level is practically constant in the blood serum—the level in the urine is subject to diurnal variations due chiefly to the digestive functions The ferment is of pancreatic origin and is absorbed directly by the blood No proof of the action of antiamylase has been found Disease of the kidneys causing any diminished permeability of these organs reduces the amount of ferment in the urine and consequently raises the amount in the blood Any disturbance in the ratio D (blood) D and M (urine) indicates renal insufficiency in all such cases Severe passive congestion also raises the amount of amylase in the blood With these exceptions any increase of the ferment in the blood serum denotes pancreatic mischief The values have been found raised by Stocks in all cases of pancreatic disease the increase depending on the degree of obstruction in any part of the gland or its ducts, and on the acuteness of the condition The highest values were found in a case of acute pancreatitis The estimation of the amylolytic capacity of the blood serum and the urine is a most delicate test of the efficiency of the pancreas, and consequently is a most delicate and reliable test for disease of the pancreas A simplified modification of Wohlgemuth's method was used by Stocks in his work

Annales de Médecine, Paris

March April, III No 2 pp 109 191

31 *Congenital Ectasia of Pulmonary Artery in Man of 65 (Cas d'ectasie simple congenitale de l'artere pulmonaire observée chez un tuberculeux entache de syphilis cerebro spinale presentant des nodules kystiques à distribution symetrique sur tout le corps) E Lenoble
32 *Cobra Venom Serum Test of Function (Sur l'activation du venin de cobra par le serum de malades atteints d'affections renales) E Duhot
33 *Action of Antiseptics in War Wounds (Action des antiseptiques et plus specialement des hypochlorites alcalins sur les leucocytes du pus et les albumines constitutees des plaies de guerre) N Fiessinger, C O Guillaumin, P Moiroud and G Vienne
34 Paratyphoid Simulating Cholera (Syndrome choleriforme et bacil les paratyphiques) Grall and G Laroche
35 *Wounds of the Chest (Notes à propos de 122 cas de plaie de poitrine) M Maillet

31 **Ectasia of Pulmonary Artery**—Lenoble's case was remarkable on account of the absence or mildness of symptoms from the combination of congenital ectasia of the pulmonary artery, cerebrospinal syphilis, pulmonary tuberculosis and about twenty cystic nodules scattered symmetrically over the body The man of 65 was a day laborer and had raised fourteen children One of the cysts was located in the fourth ventricle but the man succumbed to rapid pulmonary tuberculosis

32 **Cobra Venom Hemolytic Test with Nephritis**—Duhot gives the findings in the serum from twenty-six patients with kidney disease and seventy-seven with various other affections The findings were positive with remarkable constancy in the serum from patients with kidney trouble of any kind The reaction was also peculiarly prompt and peculiarly intense in them, regardless of the clinical severity of the kidney disease and of the absence or presence or degree of uremia Positive findings to a lesser degree were obtained also in other conditions in which the lipoid content of the serum is generally augmented, as in pregnancy, diabetes and infectious diseases

33 **Action of Antiseptics in War Wounds**—The research here described was done with eight of the antiseptics currently in vogue, including 1 1,000 mercuric chlorid and Dakin's hypochlorite solution The effect on the leukocytes was estimated from the movements of the granules and the staining properties as well as from the breaking up of the cell Illustrations are given of the aspect of the cell at different periods under the influence of the various antiseptics The alkaline hypochlorite solutions have a prompt dissolving action, liquefying the pus, red corpuscles and blood clots in the wound. This dissolving action is the work of the sodium, and it is annulled by too much boric acid and by salt Living tissue protects itself against this dissolving action by its salt content Irritation of the tissues around a wound being irrigated with hypochlorite solution can be warded off by keeping them covered with a compress moistened with a 20 or 40 1,000 salt solution Charts and tables are given to illustrate this protective action of weak salt solution, effectually protecting the cells and tissues against harm from the hypochlorite solutions Dakin's formula ensures sufficient dissolving action while but slightly irritating normal tissues, and this irritation can be warded off with the 2 or 4 per cent salt solution the hypochlorite and salt just balancing each other

35 **Firearm Wounds of the Chest.**—Maillet's 122 cases illustrate anew the paramount importance of early and prolonged immobilization in treatment of wounds of the chest Gelatin, calcium chlorid and other measures to check hemorrhages were always supplemented by emetin which seemed to have an especially favorable influence in combating a tendency to hemoptysis In one case artificial pneumothorax succeeded when all else had failed These patients are particularly sensitive to getting chilled, and they develop serious congestion at the slightest exposure Quinin was given in the cases with congestion When the effusion could not be tapped, injection into the pleural cavity of 10 c.c. of a 5 per cent solution of methylene blue aided in warding off suppuration.

Bulletin de l'Académie de Médecine, Paris

April 25, LXXV, No 17, pp 453 490

36 Pseudo Appendicitis Diverticulitis, Two Cases (Sur quelques traits de l'histoire clinique du diverticule de Meckel) E. Kirmisson
37 The Power of Microbes to Injure Leukocytes is Index of Their Virulence (Du mode d'action de certains antiseptiques et des procedes destines a apprecier leur valeur therapeutique.) Maurel.

Paris Médical

April 29, VI, No 18, pp 409 424

38 *Recovery Under Serotherapy of Tetanus (Serotherapie dans le tetanos declare et traitements combines.) G Etienne
39 Colloidal Iron in Treatment of Typhoid Le Fèvre de Arric.
40 Abdominal Wounds in War (La chirurgie abdominale a l'avant) R Gregoire
41 Localization of Projectiles in the Tissue (Méthode radioscopique de localisation des projectiles) R Desplats and R. Paucot

May 6 No 19, pp 425 456

42 Skin Diseases During the War (Les dermatoses pendant la guerre) Milian
43 Psoriasis Brought On by Fright or Trauma. (Le psoriasis emotif et traumatique) M Gaucher and R Klein.
44 Treatment of Soft Chancre F Balzer
45 *Prophylaxis and Treatment of Venereal Disease Among the Troops (La syphilis aux armees.) E Bodin, (Traitement de l'uretrite blennorragique aux armees) Carle, (Le 102 ou luargol) G Milian, (2 recettes pour faciliter le traitement antisyphilitique en campaigne) G Blechmann
46 Suppurating Inguinal Glands. (Adenites chancrelleuses.) H Gougerot
47 *Torpid Wounds That Refuse to Heal and Their Treatment (Les plaies atones) F Debat

38 **Antitetanus Serum in Treatment.**—Etienne does not share the pessimistic views of many in regard to serotherapy of tetanus, having had five patients out of six recover under systematic administration of antitetanus serum The men all

had fever except one and this was the one fulminating fatal case This patient proved to be a carrier of tetanus germs as he had no symptoms until under a course of quinin the fulminating tetanus developed Salette has observed similar cases and Vincent has reproduced the same in animals, quinin injections arousing latent tetanus to a rapidly fatal course In Etienne's five other cases, all with favorable outcome, the incubation period had been three six, seven ten or eleven days Tetanus he reiterates, is primarily an infectious disease then an intoxication, and finally a nervous affection The first calls for treatment of the focus the second for antitoxin treatment and the third for chloral and morphin With serotherapy he adds it does no good to shoot at a lion with birdshot," and adequate dosage is the main point

45 **Convenient Mercurial Treatment of Syphilis**—Blechmann says that mercury can be administered by applying a lump of mercurial ointment to the sole of the foot before pulling on the sock or stocking The constant stepping on it forces the drug into the tissues and absorption is so complete that he has had stomatitis follow in some cases The mercury can also be given in the form of a cocoa-butter suppository It may induce transient diarrhea but has no other inconvenience Both of these methods are effectual and discreet while they are convenient for troops on active service, or under other exceptional conditions

47 **Torpid Wounds**—Debat declares that the lack of exercise and the congestion from gravity amply explain the refusal of certain wounds to heal They drag along for months until active measures are applied No drugs are needed merely measures to promote the circulation while warding off harm from gravity congestion Walking with the wounded leg too soon aggravates the gravity disturbances and undoes what has been accomplished The limb should be kept raised enough to counteract gravity and the muscles vigorously contracted five minutes every hour, with daily massage and brief hot air douches, but no drugs

Presse Médicale, Paris

April 27 XXII No 24 pp 185 192

48 Operative Corrections of Ankylosis of the Elbow (La resection de l épiphyse humérale inferieure appliquee au traitement de l ankylose ou des lesions ankylosantes du coude. Avantages de l incision laterale externe pour l operation.) P Alglave
49 Abdominal Wounds in War (Traitement des plaies penetrantes de l abdomen) J Abadie.

Progrès Médical, Paris

April 20 XXXII No 8 pp 57-64

50 Fistulas in or Around the Orbit From Wounds in War Twelve Cases (Fistules orbitaires et périorbitaires) H Bourgeois
51 Combined Chloroform and Ethyl Chlorid for General Anesthesia (Du choix d un anesthesique et d un analgésique general en chirurgie et en obstetrique le chloroforme chlorethyle) J Regnault

May 5 No 9 pp 65 72

52 Training the Motor Apparatus Anew (Les reeducations de l appareil locomoteur) H Gosset.
53 *Washtubs to Stand in the Trenches (Prophylaxie des macerations et gelures des pieds) A Bailliet.

53 **Prophylaxis of Trench Foot**—Bailliet suggests for the men in the trenches to stand in wash tubs thus keeping dry and out of the mud Planks laid from tub to tub will serve as seats He suggests further that the tent cloth carried by the man be buttoned around the neck and around the top of the tub this empire robe as he calls it, thus keeping all rain and wet out of the tub while keeping in warmth especially if the tub is partly filled with sawdust

Correspondenz-Blatt für Schweizer Aerzte, Basel

April 29 XLVI No 18 pp 545 576

54 Extension Treatment of Fractured Femur (Erfahrungen uber die Behandlung der Oberschenkelbruche mit der Extension nach Bardenheuer) C Kaufmann
55 Technical Points in Meat Inspection. (Die Untersuchung auf Rinderfinnen—Cysticercus bovis s inermis—in der Fleischschau.) R Burt.

May 6 No 19 pp 577-608

56 Influencing of the Pulse by the Breathing (Die Beeinflussung des Pulses durch die Atmung) O Roth

Gazzetta degli Ospedali e delle Cliniche, Milan

April 23 XXXVII No 33 pp 513 528

57 *Phagocytosis During Acute Infectious Diseases (Alcune ricerche sul comportamento del potere fagocitario nelle malattie infettive) C. Romagnolo

April 27 No 34 pp 529 544

58 Improvised Arrangements for Isolation in the War Zone. (Come si puo costituire un locale d isolamento in Zona di Guerra) I Pancrazio

April 30 No 35 pp 545 560

59 The Vitamins E Bertarelli
60 Recovery From Severe Puerperal Fever Under Intravenous Injections of Mercuric Chlorid (Sopra un caso di setticemia puerperale guarito con le iniezioni endovenose alla Baccelli.) A. Sofi

57 **Phagocytosis in Acute Infections**—Romagnolo used Stuber's technic for determining the phagocytosis and reports the findings and all details of twenty-four cases of typhoid, meningitis or other acute infectious disease. At first phagocytosis grows less then the defensive forces rally and it increases notably and then gradually drops back to normal The height of the phagocytosis may correspond to the period just preceding the crisis of the disease or it may occur while the fever is at its height or not until convalescence is well under way In one case of erysipelas phagocytosis kept on a very high level even after defervescence and this was explained by the return of the disease, a second attack following on the heels of the first. When the phagocytic power keeps low and grows lower as the disease progresses, the outlook is grave

Policlinico, Rome

April 16 XXIII No 16 pp 485 516

61 Influence of Quality of Peptone Used in Bacteriologic Work. C Gorini
62 Soldier s Heart (Il cuore dei soldati) G Galli
63 Importance of Collaboration Between Surgeons and Neurologists in Treatment of the Wounded (Per una piu giusta e piu utile collaborazione fra nevrologia e chirurgia di guerra.) L Bobbio
64 Gas Gangrene (Contributo alla cura della gangrena gassosa) T Giovanni

April 30 No 18 pp 549 580

65 Ready Made Culture Medium for Rapid Diagnosis of Cholera. (L uso del terreno di Aronson nella diagnosi rapida del vibrione colerigeno) G Volpino
66 *Virulence of the Blood in Animals With Foot and Mouth Disease (La virulenza del sangue degli animali malati di afta epizootica) G Cosco and A Aguzzi
67 *Epinephrin in Treatment of Nephritis (Cura della nefrite con la soluzione di adrenalina nella pratica di condotta) G B Borelli

66 **Virulence of the Blood in Foot-and-Mouth Disease in Animals**—Cosco and Aguzzi have been conducting research on an extensive scale under the auspices of the national public health service In 116 cattle examined the blood was found virulent during the entire febrile course of the foot-and-mouth disease as virulent as the products of the aphthous eruption The red corpuscles and the serum are equally virulent and the defibrinated blood kept on ice retained its virulence for over a month Red corpuscles thoroughly rinsed from all traces of serum and the serum alone, reproduced the disease on subcutaneous injection of other cattle in a dose as small as 1 c c They regard the red corpuscles thus as ideally adapted for production of a vaccine, and they are now working along this line

67 **Epinephrin in Treatment of Nephritis**—Borelli reports two cases of acute and one of chronic nephritis in which remarkable benefit was realized by epinephrin treatment One patient was a child nearly 5 the others men of 50 and 62 He gave the child sixteen drops a day of a 1 1,000 solution of epinephrin four drops at four hour intervals The adults were given forty drops a day eight at a time Ercolani called attention in 1910 to the benefit from epinephrin by the mouth in nephritis commending the harmlessness, ease and efficacy of this method of treating kidney disease which has proved its usefulness again and again and Borelli s experience has confirmed his statements

Brazil-Medico, Rio de Janeiro

April 8 XXX No 15 pp 113 120

68 Diphtheria Bacilli Not Found Invariably in Diphtheria (Diagnostico bacteriologico da diphteria) E Gomes

69 *Syphilis of the Stomach (Contribuição ao estudo da syphilis do estomago) O Clark Concluded

April 15, No 16, pp 121 128

70 Principles for Protection Against Intestinal Parasites (Os nematoides do tubo digestivo de que modo infestam o organismo? Prophylaxia) A A da Matta

71 Severe Polyarthritis of Gonorrheal Origin in Bride (Arthrite blennorrhagica em uma recem nupta, sem localisação primitiva apreciavel Arthrotomia — Cura) I L Rodriques

69 **Syphilis of the Stomach**—The earlier instalments of Clark's article were summarized in these columns May 20, p 1665 He here gives the minute details of his eleven cases, tabulating them for comparison In three cases the patients had no suspicion of their syphilis, in five the disease had been acquired eleven, fifteen, twenty-seven or thirty years before The stomach had given trouble for three months, eight days, ten months and eighteen months in these cases In one case severe hematemesis on three occasions was the only symptom and mercury soon conquered this In another case the fatal hematemesis was the first sign of anything wrong In conclusion Clark compares his experiences with the twenty-six cases reported by Smithies in The Journal, Aug 14 1915 and the cases referred to by others in the discussion Clark emphasizes the resemblance between the clinical pictures in syphilis and in cancer of the stomach in certain cases

In Clark's latest case there was stenosis of the pylorus from a tumor with much dilatation of the stomach and positive Wassermann reaction, but he was unable to determine whether the trouble was of syphilitic or malignant origin There was no free hydrochloric acid and the man of 55 did not present the cachexia and pallor of cancer, the absence of anemia testifying also against malignant disease The patient was ruddy and there was no trace of metastasis although the symptoms had been noted for eighteen months He refused to take a hospital course of treatment so the diagnosis is still dubious

Semana Medica, Buenos Aires

No 5 XXIII, pp 115 142

72 *Sclerosis of Pulmonary Artery, Two Cases (Cardiacos negros de Ayerza) C P Mayer

73 Brazilian Mosquitoes (El Anopheles albitarsis I Lch A) J Brethes

No 6, pp 143 170

74 Intravenous Treatment With Autogenous Extract of Feces (La Coproterapia endovenosa) M A Marini

75 Mechanism of Fractures in General F I Castro

No 7 pp 171 198

76 Edema of the Bladder (Edema bullosum de la vejiga) J N Posadas and E Pozzi

77 *Will Valid Made the Day Before Death From Typhoid (Informe medicolegal sobre el estado mental y la capacidad de testar de un enformo fallecido de fiebre putrida) J J Benitez

No 13, pp 347 378

78 *Is Adiposis Dolorosa Connected With Syphilis? (Contribucion al estudio de la adiposis dolorosa) R G Pizarro

79 Remuneration of the Physician (De los honorarios medicos) A Stucchi

80 Ophthalmology in North America and in the Argentine Republic. (Viajes cientificos) Juan Santos Fernandez

72 **Sclerosis of the Pulmonary Artery**—The cyanosis of persons with typical sclerosis of the pulmonary artery has won for them in Argentina the name of 'black cardiacs,' *cardiacos negros* Ayerza applied this term to cases of secondary sclerosis and Arrillaga has published eleven typical cases Mayer now adds two more to the list His patients are men of 44 and 53 The cyanosis developed two or four years ago, but for some years before that there had been repeated "colds" and chronic bronchitis with tendency to emphysema and sometimes blood in the sputum and the men's endurance was reduced Nothing in the heart or respiratory apparatus explains this intense cyanosis The fingers and toes show the drumstick shape of chronic pulmonary disease, especially disease of the pulmonary artery, and the fundus of the eyes shows dilation of the veins The blood is approximately normal except for marked lymphocytosis and positive Wassermann reaction Both patients are extremely somnolent and are subject to painful spasms in the chest, a kind of angina pectoris from angioneurotic dyspragia of the pulmonary artery, without participation of the heart The pain spreads from the base of the heart to the depths of the lungs The pulmonary artery is always dilated as also the right ventricle, and the second pulmonary sound is accentuated The absence of edema with the cyanosis, the constant drowsiness, the normal temperature unless there are complications and the Roentgen findings usually readily differentiate the trouble Cupping and digitalis were the chief reliance in treatment and gave much relief

77 **Validity of Will Drawn During Typhoid Fever**—Benitez devotes nearly twenty pages to the evidence on record as to whether a will signed within forty-eight hours of death from typhoid is valid in law He discusses what is meant by typhoid fever, the mental condition of typhoid patients, and the factors which entail death His conclusion is that in the great majority of cases the mind is normal during the day or two before death

78 **Adiposis Dolorosa in Relation to Syphilis**—Pizarro summarizes the history and literature of Dercum's disease, and describes a case from his practice which seems to throw light on its etiology and treatment His patient was a woman of 52 who had menstruated early and borne a child young The child died in two hours, and there has been no pregnancy since except one possible early abortion At 46 the first sign of the adiposis dolorosa developed, and menstruation ceased at 48 At the age of 52 the disease in the mixed form of adiposis, was extreme, as also the pains, but the urine was normal On one occasion the repeated Wassermann test elicited a positive response, and on the basis of the single Wassermann reaction vigorous mercurial treatment was applied and improvement was promptly evident The blood findings on repeated examination confirmed the clinical improvement The masses of adipose tissue retrogressed almost entirely The patient had no further spontaneous pains and instead of the huge unwieldy adiposis as shown in the illustrations she is said to have become agile and capable (*agil y dispuesta*) Her weight at any time is not mentioned She had been given ovarian treatment at first and this was kept up with iodid after suspension of the mercurial treatment Pizarro presents his conclusions in the form of twelve questions, asking, Is it possible that adiposis dolorosa is of syphilitic origin? Has treatment as for syphilis been tried before in this disease? If it has been tried, and no benefit resulted, could this have been owing to inadequate dosage or other defective technic? In this case were the adiposis dolorosa and the syphilis independent or not of each other? Is it not a common occurrence that syphilis aggravates dystrophies and other manifestations of defective functioning of the ductless glands?

Russkiy Vrach, Petrograd

XV No 10, pp 217 240

81 Pirogoff's Report on Garibaldi s Wound S Y Streich

82 *Agglutinins in the Blood of Children After Injection of Typhoid Vaccines (O narostanii agglutininov v krovi u typhoznikh vaktzin) P S Medovikoff

83 Care and Evacuation of Insane Soldiers on Active Service in the Southwest (Priznienie i evacuatzie dushevnobolnikh voinov dieistvuiushtshikh army v C Zapadnom raionie) N N Reformatsky

No 11, pp 241 264

84 *Influence of the War on Neurasthenia in Soldiers on Active Service A V Gerver Commenced in No 10

85 *Mental Derangement Caused by the War or Due to Brain Lesions M S Urstein

86 *Diagnosis of Aneurysm of the Pulmonary Artery, Necropsy Findings in One Case P N Nikolaieff

87 *Disturbance in Vision Caused by Denatured Alcohol (O razstroistvakh zrieniya pri otravlenii denaturvannim spirtom) V N Eleonskaia

88 Complications of Vaccination Against Typhoid (K voprosu a posliedstviyakh protivotyphoznikh privivok) G A Akhiezer

82 **Vaccination of Children Against Typhoid**—Medovikoff vaccinated seventeen girls from 8 to 14 years old, in order to find out whether antityphoid vaccination produces in children any reaction, and whether agglutinins form and accumulate during the period of vaccination He used Wright s bouillon vaccine, Kolle's agar vaccine or Vincent's vaccine each in about a third of the children Three injections were

made, each hypodermically below the scapula, with eight day intervals The dose for the first injection was 0 5 c c per 60 kg of body weight, for the second injection, twice and for the third three times the amount used for the first injection The local reaction showed the next day in the form of redness swelling and tenderness, in some cases the axillary glands became swollen The general reaction was insignificant merely slight headache, some malaise, and a very slight elevation of the temperature which was somewhat higher after Wright's vaccine Before the first injection it was established that the serum (1 20) dilution did not agglutinate typhoid bacilli After the vaccinations, the agglutinins began to appear by the sixth day after the first injection and kept increasing after the subsequent vaccinations Thus any of these varieties of vaccines can be used as with each and all of them production of agglutinins takes place His experience also shows that in children as well as in adults, immunity against typhoid infection can be successfully induced and thus they can be protected against this disease in case of an epidemic

84 **Neurasthenia in Soldiers on Active Service**—Gerver found from repeated observation of neurasthenia in soldiers that it manifests itself in the war environment with the same clinical symptoms as in time of peace The specific features are impulsive ideas and phobias, even the entire sphere of consciousness may suffer The existing conditions of warfare imprint special features on the neurasthenia The forms with agitation show during periods of hot battling, while trench warfare elicits the more torpid forms of neurasthenia The physical symptoms also are the same as in time of peace headache dizziness tinnitus and diminished hearing Clavus that is, an acute sharply localized pain especially in the occipital region is also very common and hysteria is a frequent complication

85 **Mental Disturbance in Soldiers**—According to Urstein's observation, psychic disorders caused by brain trauma develop usually only when more or less extensive portions of the gray matter of the cortex are involved, though it is possible for even circumscribed lesions of the brain as, for instance, fracture of the skull, hemorrhages, etc., to affect the mind The immediate result of brain trauma is mental confusion The patients appear somnolent, dazed forgetful and absentminded In severe cases unconsciousness may last for hours and even days Other symptoms are headache fainting, dizziness, vomiting, slow pulse, pupil disturbances, paralysis and convulsions The mental confusion usually shows immediately after brain trauma, but in some cases only after an interval of hours or days In addition there are observed changes in the character, excessive sensitiveness excitability and irritability, exhilaration, maniacal states and hypochondriac ideas In general, the clinical picture resembles that of traumatic delirium The symptoms of delirium become more pronounced when the course is unfavorable, which may be due to abscess formation or to a meningo-encephalitis In such cases somnolence sets in, followed by coma, convulsions, paralysis and rise in temperature

The most frequently observed psychosis was catatonia, next in frequency psychopathic constitutional anomalies, epileptic insanity and finally manic-depressive states Urstein has also encountered cases of the so-called exhaustion psychoses, hysterical psychoses and progressive paralysis of the insane The latter was observed only in soldiers over 30 years old There does not seem to be any specific psychoses, according to Urstein He claims that a psychosis develops only when there was a certain predisposition That is the elements of the psychosis were present before the man went to war, the latter but hastened its development In general the so-called war psychoses do not differ from those in time of peace though the clinical symptoms may be somewhat peculiar depending on the character of the warfare.

86 **Aneurysm of Pulmonary Artery**—In 271 cases of so called internal aneurysms, Nikolaieff found aortic aneurysm in 86.3 per cent of the cases, while the pulmonary artery was involved in only two cases, that is, in 0.7 per cent He reports in detail a case of aneurysm of the pulmonary artery in which the diagnosis was confirmed by necropsy The main symptoms were dyspnea, repeated and abundant hemoptysis which yielded to rest, and a marked systolic murmur heard at the back, especially in the interscapular space at the base of the lungs The auscultation phenomena at the base of the heart were changeable, sometimes systolic, sometimes diastolic murmurs were heard, and they were very inconstant appearing only during disturbed compensation in the lesser blood circle Necropsy revealed some narrowing of the aortic orifice, and considerable dilatation of the branches of the pulmonary artery The diameter of the left branch was 2 5 cm The right and left ventricle were considerably hypertrophied the cavities not much dilated Another feature of the case was the protracted course—six and a half years—and it might have been longer if the patient had not succumbed to intercurrent pneumonia The Wassermann test was negative, Roentgen examination gave indefinite results

87 **Poisoning from Denatured Alcohol**—Eleonskaia comments on the extreme frequency of poisoning from denatured alcohol in the Petrograd hospitals soon after the sale of liquors was forbidden From 123 to 332 persons per month were treated in one hospital, while in another during the six months 1 292 cases were admitted As denatured alcohol contains about 1 per cent of wood alcohol which affects the vision causing amblyopia, the latter was a very common occurrence in cases of denatured alcohol poisoning Of 1,432 men treated during 1915 for poisoning from denatured alcohol, 6 per cent suffered from amblyopia Half of this number drank denatured alcohol only, while others used in addition cologne water and furniture polish It required three or four months for the onset of visual disorders, and this occurred usually only after large quantities of alcohol had been imbibed The main symptoms were decline in visual acuity, especially of central vision, and disturbances in color sense especially for red and green Occasionally central scotoma for all colors was observed, including white Narrowing of the field of vision was observed in 15 out of 40 cases examined and the fundus was found changed in 61 out of 96 cases (hyperemia of the papilla, blurred outline, pallor of the temporal half of disk, etc) The pupils were usually normal Abstinence from further use of denatured alcohol brought in many cases improvement of vision, but very slowly and imperfectly In general the visual disorders caused by the use of denatured alcohol are milder than those brought on by pure wood alcohol, but they are more severe than those from plain alcohol

Nederlandsch Tijdschrift voor Geneeskunde, Amsterdam

April 1 I No 14 pp 1145 1228

89 *Spasmophilia in Children Over Three. (Spasmophilie bij het oudere kind) H A Stheeman
90 Means to Maintain the Normal Body Temperature in Decerebrated or Decapitated Animals (Twee methoden om de lichaamstemperatuur van gedecerebreerde of gedecapiteerde dieren langen tijd standvastig te houden) W S Van Leeuwen.
91 No Benefit Apparent From Thyroid Treatment in Twenty Two Cases of Dementia Praecox (Mededeelingen over proeven van behandeling der dementia praecox met schildklierpraeparaten) J G Schnitzler
92 End to End Suturing of Vena Cava at Nephrectomy (Een geval van circulaire vena cava hechting bij nephrectomie) J W Van Bisselick.

April 8 No 15 pp 1229 1312

93 *The Declining Birth Rate and Measures for Infant Welfare (Geboorteachteruitgang en zuigelingenbescherming) H. W Methorst.
94 Influence of the Diet on the Response to the Cammidge Test (Over den invloed van de voeding op den uitslag van de reactie van Cammidge.) C J C Van Hoogenhuyze and S Nagasaki
95 Localization of Peripheral Facial Paralysis (Bijdrage tot de localisatie van perifere facialis-verlammingen.) J G Drossaers

89 **Spasmophilia in Children**—Stheeman found in examining 100 children that the Chvostek and Erb signs were both positive in 32, the latter alone in 14 and the former alone in 17 Thus in 100 children, selected at random, 46 per cent presented the Erb phenomenon—which is regarded as pathognomonic of spasmophilia—and 63 per cent presented this or the Chvostek. Only 4 of the children had actual tetany The larger proportion reacting, and the more pronounced reactions were in children between 7 and 12 His record

thus testifies to an unsuspected prevalence of a tendency to abnormal spasmophilic nervous conditions in older children Children inclined to asthenia seem most predisposed to it Chronic digestive disturbances and neuropathies also afford a predisposition An unstable vasomotor system, excitability of the abdominal vagus or sympathetic system, and the facialis phenomenon suggest spasmophilia, and electric tests confirm the diagnosis Treatment should be instituted without delay to correct whatever is wrong, with digestive disturbances, keeping the child in bed for a time with individualized dietetic treatment. With nervous loss of appetite or nervous vomiting, a change to another environment is indicated Outdoor life is of paramount importance when the general condition permits, that is, when there is no serious intestinal disturbance In all cases phosphorus-cod liver oil will be found of decided benefit

A number of cases are reported in detail to illustrate the variety of clinical pictures that may be induced by the spasmophilic tendency, from spasmodic stenosis of the bowel, rotatory tic and petit mal, palpitations, gastric achylia, enuresis, hyperchlorhydria and spastic anemia to choreiform movements and the so-called umbilical colic All of these yielded to the treatment outlined above The spasmophilia of the vegetative nervous system, vagotonic spasmophilia, may cause severe and recurring abdominal pains One girl of 10 was long treated for tuberculous peritonitis on account of a tumor palpated in the abdomen The spastic constipation and Erb reaction, with the favorable action of belladonna and castor oil, finally cleared up the diagnosis as spasmophilic vagotony, and a complete cure followed systematic phosphorus treatment Another typical instance is that of a boy of 10 with recurring attacks of vomiting, with fever, and severe pain at times, beginning to the left of the epigastrium and spreading through it, lasting for an hour or two The sympathetic plexus was tender and the pillow was wet with saliva at night Under phosphorus-cod liver oil and belladonna the pains subsided and have never returned, and the bowel function is regular By the end of two weeks the previously lively Erb reaction had also vanished and the child seemed bright and well

93 The Birth and Death Rate in the Netherlands—Methorst gives a number of charts comparing the birth and death rates in the Netherlands with that in other countries through the five-year periods since 1840 Other charts and maps show the death rate by months, the various causes of infant mortality by districts, etc In the Netherlands before 1898 the infant mortality in the cities was higher than in the small towns, but since then the proportions have been reversed In 1911, the cities with over 100,000 inhabitants had an infant mortality of 9 88 per 100 born living, and by 1914 this had been reduced to 6 88 In the towns with less than 5,000 inhabitants the figures were respectively 15 81 and 10 60 The statistics cited from twenty-five countries place the Netherlands eighteenth on the list of high infant mortality, Russia heading the list with 25 8 mortality among 100 infants born living, Hungary and Spain, 18 4, Prussia and Japan, 15 9, Italy and Belgium, 14 1, France, 12 6, England, 11 7, Switzerland, 11 5, Netherlands, 11 4, Australia, 7 8, Norway and New Zealand, 7 The Netherlands stands twentieth in the figures for the general mortality In the Roman Catholic families of the Netherlands 287 births are credited to each 1,000 married women under 50, in the Protestant families 219, in the Jewish, 157, and in other families 88 These figures are for 1909-1910 The infant mortality classified in this same way for about the same period shows that of 100 children born living in Roman Catholic families, 13 6 died within the first year, in the Protestant families, 9 5, and in the Jewish, 7 5 The general birth rate per 1,000 nts was in 1840 about 34, and had dropped to 28 in Netherlands thus stands fourteenth on the list of -five countries cited with high birth rate

Hospitalstidende, Copenhagen

April 12, LIX, No 15 pp 329 368

Medication in Abortive Treatment of Gonorrhea af min Abortivbehandling — Kobber Jontoforese — O Jersild

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April 26 No 17, pp 393 416

97 Localized Traumatic Lesions of the Frontal Lobes (Lokaliserede traumatiske Hjærnelæsioner) A Wimmer Commenced in No 16

Ugeskrift for Læger, Copenhagen

April 20, LXXVIII No 16, pp 585 630

98 *Congenital Talipes Valgus (Om medfødt Pes valgus og calcaneo valgus) H C Slomann

99 The Extracardial Circulation (Nyere Undersøgelser over Arteriernes Evne til at kunne befordre Blodstrømmen) H I Bing

98 Congenital Talipes Valgus—Slomann comments on the scanty literature on this type of congenital clubfoot, declaring that congenital flatfoot is one of the most frequent congenital deformities, far more frequent than talipes varus, which the textbooks say is the most common form of clubfoot At the same time the congenital flatfoot is of essential clinical importance It is a deformity which calls for treatment and responds readily to it He gives illustrations of two typical cases and the clinical details of these and three others out of his fifteen cases in infants in the last three years During this period he has encountered 104 young children born with deformities, congenital dislocation of the hip joint in eighteen and only seven new cases of clubfoot The latter was bilateral in all, but most pronounced on one side Only one of the children had been born with breech presentation One of the mothers also had congenital flat foot The deformity may correct itself in a few months from the exercising of the muscles when these alone are responsible for it But when the bony framework of the foot is abnormal, spontaneous correction is out of the question In any event, unless correction is complete before the child starts to walk, the deformity is fastened for life when the weight of the body is borne regularly on the foot An instructive case of the kind is that of a girl of 13 born with left talipes calcaneovalgus which had apparently corrected itself and there seemed to be nothing abnormal about the feet At the age of 12, however, the use of the left foot caused much pain, the findings and disturbances characteristic of tender and painful flatfoot

In treatment of congenital flatfoot, the simplest means to correct the contracture are the best, operative means are unneeded and irrational when it is merely a question of shortening the overstretched muscles They regain their elasticity when given a chance to contract He has always been successful in correcting contracture of this kind by patient and cautious stretching of the muscles under general anesthesia—the muscles involved are small ones and the forepart of the foot affords a firm hold He says that Stern found it necessary to do tenotomy in nine of his twenty three cases, and possibly the deformity was so extreme that the knife may have been indispensable But bloodless stretching should at least be given a trial in every case before resorting to the knife Everything favors beginning the treatment early, so that the correction will be complete before the child starts to walk The use of the foot with talipes varus aids in the correction but with talipes valgus it undoes what has been accomplished, unless correction is absolutely complete The severer the deformity, the earlier treatment should be begun, but it is seldom necessary to begin before the child is 8 or 9 months old During the preceding months daily manipulations of the foot along the lines of correction may accomplish alone the desired result, and will facilitate it in any event General anesthesia is usually necessary for the complete correction Several sittings may be required at eight or ten days intervals, the foot and leg in slight overcorrection in a plaster cast This fixation is kept up for from three to six weeks and then a small leather correcting appliance is worn, removed every day to pert massage of the plantar muscles and of the leg and bathing When this is discarded a flatfoot shoe is worn, and at night the overcorrecting bandage This not only holds the skeleton in the corrected position but relaxes the weak and stretches the overstrong muscles Any tendency to permanent overcorrection is soon overcome by the use of the foot These measures must be kept up until the naked foot keeps the normal shape unmodified by excessive weight bearing As a rule several years are required for this But only by this means will they be saved from flatfoot distress in later life

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SOME OF THE LARGER PROBLEMS OF THE MEDICAL PROFESSION *

RUPERT BLUE, M D
Surgeon General, U S Public Health Service President of the American Medical Association
WASHINGTON, D C

The profession of medicine enters into and touches every human activity from the first kindling of the vital flame until life's candle flickers out The joys of being and the sorrows of life, the travail of labor and the relaxations of idleness, the opulence of riches and the meagerness of poverty have running through their web and woof the fine blue thread of the calling which has as its ideal the physical salvation of mankind Throughout the nearly seventy years of its existence the American Medical Association has clung with unfaltering fidelity to the doctrine of the prolongation of human life and the relief of the miseries of man In peace and in war, in prosperity and in public calamity, in crowded city and on isolated frontier, despite all opposition, it has moved steadily forward toward the goal of health, recognizing neither creed nor sect, neither school nor system, but solely the sacredness of its objects The catholicity of its principles, the high altruism of its ideals, and the broad basis of its humanity have preserved it inviolate against the attacks of those who would revert to primeval incantations, ignorance and chicanery in the prevention and remediation of disease The passage of the years is marked by a trail of discarded superstitions on the one hand and by the monuments of scientific progress on the other, and the very obstacles which have been thrown into the path which we have trod have proved stepping stones to higher ground

Today, as we look back over the achievements of this Association, we receive inspiration from the work of those who have gone before us The researches of our medical forebears are a priceless heritage, entailed for all future generations But as we review the triumphs of the past and plan fresh victories for the future, our happiness in the joy of this pleasant reunion in the bonds of scientific fellowship is not without its note of sadness

Since our last annual meeting death has called from our midst a number of the strong men of the profession of medicine In the loss of that lovable and kindly gentleman, Dr Edward L Trudeau, the world has been deprived of a great leader in the antituberculosis movement In the death of Surg -Gen George M Sternberg our profession and the nation have lost an officer eminent in science and a pioneer in the field of military hygiene In the passing away of Dr Henry B Favill the country has been robbed of a powerful intellect which was being more and more devoted to the cause of good government, clean politics, municipal improvement and sanitary progress In the untimely death of Dr William L Rodman the Association has been bereaved of its President, and America has lost a distinguished surgeon and a public-spirited citizen We would also remember at this time the members of our profession and Association who, through love of their fellow men, volunteered to serve mankind in those countries unhappily divided by war and stricken by pestilence, and who by so doing sacrificed their lives to the ideals of our profession

By reason of their relation to the Association, we glory especially in the accomplishments of Rodman and Favill, and extend our condolences to their sorrowing relatives and friends, with whom we mourn In the solemnity of this moment let us take inspiration from their lives, that their ideals may pass on to us, and that we may more faithfully discharge our duties to mankind

The limitation of time does not permit the recitation of the scientific accomplishments since our last meeting, neither does it suffice to enumerate the fields of activity which lie fertile before us The movement for race betterment, the increase of child hygiene and the restriction of child labor deserve and receive the approval and assistance of this body The necessity for the advancement of the campaign for mental hygiene, the cure and prevention of tuberculosis and cancer, and the improvement in the collection of vital statistics, particularly morbidity statistics, is so great as to require no argument

MEDICAL AND SANITARY EDUCATION

Since its inception the American Medical Association has endeavored in every way to raise the standard of medical education, and as the result of its labors there has been constant improvement, particularly in recent years Not only are the graduates of today better qualified in the science of medicine than those of ten years ago, but they have a broader grounding in the general sciences as well These are decided improvements, but should not satisfy us As an Association, we should continue to urge and adopt every means which will better qualify medical men for their calling Improved laboratory and hospital facilities are now being made available to medical students in greater degree, and the standard of medical practice is accordingly raised Not enough attention is being paid, however, to the subject of hygiene, in either undergraduate or postgraduate courses Thus far the members of the medical profession have been looked to

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* President s address before the American Medical Association at the Sixty Seventh Annual Session Detroit June 1916

as the natural conservators of individual and community health With the increasing interest in this subject, however, and the facilities for giving instruction in public health work being established in institutions other than medical schools, there is likelihood that in the future medical graduates will have sharp competition in a field which they should naturally occupy The time is at hand when localities and states will demand the services of full-time health officers, and the medical profession should look forward to meeting this requirement It is suggested, therefore, that the Council on Medical Education and the profession generally give greater attention to this growing need

MEDICAL AND SANITARY PREPAREDNESS

The American Medical Association, as a national body, has come to bear an important relation to everything medical which affects the nation as a whole It has, therefore, interested itself in the improvement of the Medical Departments of the Army and the Navy and the Public Health Service

The Medical Department of the Army is charged with the duty of preserving the sanitary condition of the army and with certain important functions of administration and organization In its relation to the people of this country by far its most important activity is along educational lines Some thirty to fifty thousand young men join the army each year, and a similar number annually pass back to civil life During the period these men remain in the army they come into direct contact with the medical department Their ideas and standards as to housing, food, clothing, ventilation and lighting are all materially influenced by their sojourn in the army, and even more definite impressions are acquired from the medical department with reference to such matters as disease and its treatment, preventive medicine, temperance and recreations At almost every point in his new environment the recruit comes into contact with the ideas and teachings of the army medical department, and he returns to civil life with a much broader and more enlightened view of hygienic principles

The great lesson of the European war which we as medical men should take to heart is the importance of thoroughly preparing the medical and sanitary forces in time of peace, so that they may be ready to take their proper place and to efficiently relieve the sick and wounded and prevent disease in time of actual conflict Not only must the land forces be put on the footing of highest efficiency, but it is perhaps even more important that the Medical Department of the Navy receive the active support of the entire citizenship The multifarious character of the duties of the medical corps of the navy requires officers of broad training This Association should continue in the future as in the past to afford to the Medical Departments of the Army and Navy every assistance in its power

The problems which confront the Public Health Service are of a different character from those of the strictly military arms of the government This organization is rapidly expanding to meet its duties in the protection of the health of the civilian population of the United States The crying need of the Public Health Service at the present time is men and money Congress has never been slow in imposing functions on the Public Health Service, but it has been extremely conservative in the matter of appropriations and increased personnel to discharge the added duties As yet, Congress has not seen fit to establish a national department of health, and pending the creation of that much-needed department, the Public Health Service must perform the public health duties of the nation It is incumbent on every citizen of this country who is interested in the conservation of human life to assist and cooperate with the Public Health Service

ENLARGEMENT OF USEFULNESS OF HOSPITALS

One of the extremely important matters in which this Association should take an active interest is the utilization of hospitals in order that they shall not only have greater application in the relief of illness, but be of greater utility in times of national stress

In many general hospitals there is opportunity to increase efficiency through organization It is probable, for instance, that the most accurate knowledge of the distribution of certain preventable diseases could be obtained by regular reports from hospitals and dispensaries if these were comparable Moreover, it should become possible in greater degree to admit many cases of illness, such as tuberculosis and venereal infections, now excluded, but which profoundly menace the public health Hospitals are public servants and as such should be utilized to the fullest extent, not only in the relief of illness, but also for educational and public health purposes

IMPROVEMENT AND STANDARDIZATION OF REMEDIAL PREPARATIONS

Further effort should be made to determine the availability and use of remedial preparations The remarkably valuable work of the Council on Pharmacy and Chemistry is well known to you As a result of its untiring efforts for more than a decade, our knowledge of useful remedies has been increased, the Pharmacopeia improved and the physicians' armamentarium made more serviceable Much, however, remains to be done The determination, for instance, of the value of biologic products used in the prevention and treatment of the diseases of man and the elimination of those which are without worth is a matter of urgent need, meriting the earnest consideration of this Association While it is the province of the federal government to promulgate standards for these preparations, the determination of their therapeutic value is a function of the medical profession

In the enforcement of the law regulating the propagation and sale of viruses, serums and toxins, it is possible for the Public Health Service to guard against the sale of contaminated preparations It insures to physicians the full strength of those preparations for which standards have been devised, but it cannot guarantee the potency of preparations for which standards have not been fixed, and which practitioners generally are being urged to use in greater degree In order to determine this potency, the medical profession has a duty to perform

By encouraging therapeutic research along broad lines through hospitals and clinical laboratories, the Council on Pharmacy and Chemistry would facilitate the standardization of useful biologic preparations and restrict the exploitation of doubtful ones, thereby saving millions of dollars annually to the country I would accordingly suggest that this be made the subject of intensive study, thus supplementing the researches already under way in respect to other preparations

Through its helpful attitude, the medical profession has contributed to the enforcement of the antinarcotic law. As a result, a multitude of data are being recorded to show not only the public health importance of the control of habit-forming drugs, but the additional measures that are necessary to this end. I doubt if any of us here present comprehend fully the social and sanitary significance of this vast problem and the relation of individual practitioners thereto. It should be our earnest effort to aid in restricting the use of narcotics for other than medicinal purposes, and thus aid in overcoming an evil of the gravest menace. While as an organization we may not influence specific legislation, it is entirely within our province to strive to mold public opinion, which will beget wise laws and proper provisions for their enforcement.

HEALTH INSURANCE

As a result of recent workmen's compensation laws and the increasing interest in the health of wage-earners, the subject of health insurance is rapidly coming to the front. This is a question which we as a profession will be called on to face in the not very distant future.

Studies of the economic and sanitary conditions affecting the health of the industrial population have shown the urgent need for more effective methods for the relief and prevention of disease among the 30,000,000 of persons who comprise this group. The unskilled, low-paid workers in every community have an excessive morbidity and mortality rate, which is largely accounted for by their economic status and living environment. A large proportion of this class have incomes insufficient to maintain healthful standards of living, much less to provide adequate medical and surgical care. This places a serious handicap on the medical profession, as well as a financial burden on the poorly paid wage earner, which neither should be wholly required to bear. The public, industry and the workers themselves are at least partially responsible for the faulty conditions, and in consequence should share in the remedial measures.

To meet the situation, there are unmistakable signs that health insurance will constitute the next great step in social legislation. Experience has shown that an adequate health insurance system should distribute the cost of sickness among those responsible for conditions causing it and thereby lighten the burden on the individual. Financial incentive may thus be given for the inauguration of comprehensive measures for the prevention of disease. I would accordingly suggest that the American Medical Association continue the studies, which have been as splendidly begun, of the results of health insurance in all its aspects in this and in foreign countries, so as to decide on a program which would properly coordinate any proposed health insurance system with existing agencies for the cure and prevention of disease.

INDUSTRIAL HYGIENE

Closely allied to this is the study of industrial hygiene, a subject which will receive careful consideration in the Section on Preventive Medicine and Public Health at this session. Too many safeguards cannot be thrown about the health of operatives in industry, but we should consider the problem as it relates, not only to the workshop and factory, but to home conditions as well. Factory sanitation will fail of the highest accomplishment unless the workman is educated in the hygiene of his body and the sanitation of his home. The relation of the wage to disease, the housing problem and the health training of operatives are therefore matters which I would commend to the attention of the Council on Health and Public Instruction.

RURAL SANITATION

Rural sanitation is a matter of even greater importance. Over 53 per cent. of the population of the United States dwells in communities of less than 2,500 inhabitants, in many cases under most insanitary conditions. This is a menace not only to the health of the rural dweller, but also to that of the urban resident. The next great point of attack against infectious diseases is the small town and village. The work which the Public Health Service has been carrying on in cooperation with state and local health authorities in rural counties shows not only the necessity for increased and more widespread activity in this direction, but also that great good may thus be accomplished at relatively little cost. It is incumbent on this Association, possessed as it is of the machinery for popularizing health movements, to undertake a definite campaign for bringing health education to our rural population. If this is well done there will be a direct result in the reduction of typhoid fever, malaria and hookworm disease in the country and an increased safety in the food supplies of cities. I cannot too strongly urge on this body the necessity for intensive efforts toward the improvement of rural sanitation.

PUBLIC HEALTH ORGANIZATION

In the accomplishment of this purpose, however, we cannot stop with the sanitary enlightenment of the country inhabitant. Much he can and must do for himself, but lasting good cannot be accomplished in the absence of adequate state and local health organizations. An examination of existing laws and regulations shows that some of the states have an abundance of public health legislation. In fact, in many instances the powers and duties of the sanitary authorities far exceed the appropriations for their execution. Still others have defective laws and low appropriations, while some have little law and almost no appropriations.

In many instances considerable improvement in organization will be necessary before health authorities can functionate properly. These defects are being remedied, and many states are rapidly approaching a high degree of efficiency in their public health administration. In the counties and small municipalities, however, the greatest need for reform exists, and this Association should cooperate to the fullest extent in creating a public sentiment for thoroughly prepared, adequately salaried, full-time health officers. Indeed, it should not only create such sentiment, but, as previously stated, it should take active steps to provide without delay a large share of these public servants. The production of well-qualified men for such positions is not keeping pace with the demand. Sanitation is as much a specialty as is surgery, and simply because a physician is a successful practitioner is no guarantee that he will make a qualified health officer.

Through improved medical education and the cooperation of health departments with universities, properly qualified physicians should become available to meet this growing need. It is important also that states and localities should be able to secure the services of sanitarians without reference to legal residence. It is equally as important that medical hygienists, as well as physicians generally, should be able to practice their profession anywhere within the confines of our country without undue restriction as to academic examinations It is not at all improbable that this thought imbued our late President in founding the National Board of Medical Examiners This body, which promises so much benefit both to the medical profession and to the American public, stands as a monument to the industry and clarity of vision of our lamented colleague, Dr William L Rodman I would commend to the Council on Medical Education the study of the problem of devising some uniform means of certifying and training prospective health officers

The great effort of the future must be in the direction of the improvement of the internal health of the nation We are possessed of an adequate coast defense against disease from abroad, and what we must now do is to control those diseases which are already with us In this we require the qualified health officer and the educated public A part of this education may be secured by the printed and the spoken word, but the great agent in public education is demonstration This Association is in a position, touching as it does every stratum of society in this broad land of ours, to carry this work forward to ultimate fruition This is an obligation on our profession, a sacred duty laid on the followers of the healing art Though we minister to the sick and bind up the wounded, though we bring sight to those who see not and alleviate the suffering on the bed of pain, yet our duty is not done until we have put forth our best endeavor to the end that sickness and pain and blindness be not Poverty and ignorance, squalor and intemperance, cruelty and greed, these are the enemies which we as individuals and as a profession must combat As citizens who would maintain our nation in a condition of preparedness against its greatest enemy, disease, it is our duty to perform not only our legal obligations as physicians, but to bend our every energy to the prevention of disease No selfish or half-hearted service will suffice Nothing short of whole-souled devotion to this duty will satisfy the ideals which have been passed down to us by generations of self-sacrificing, public-spirited physicians who love their fellow men The American Medical Association represents the crystallization of these ideals If it permits no self-seeking interest to dominate its actions, if it maintains its plane of high altruism, if it devotes itself with strength of purpose to the betterment of the public weal, it will prosper in the future as in the past, serene and sure in the satisfaction of work well done Let our deliberations be so imbued with that broad spirit of charity and brotherhood that the name of the physician shall be revered

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Beriberi.—Eykman, in 1897, called attention to the fact that the disease beriberi was prevalent among those rice-eating nations which partook of rice prepared in a certain way The Bengali eats unpolished rice, that is, rice of which the red husk or pericarp has not been removed, and he does not suffer from beriberi When the native of the Philippines pounds his rice in a large mortar with his own hands, the milled product is never so thoroughly freed of its husk as happens to that milled by machinery, and hence these natives are partly protected from the disease A diet which is based almost exclusively on white rice causes beriberi with certainty Eykman also found that when chickens or pigeons were fed on white rice they developed a disease similar to beriberi General weakness, with paralysis of the legs and wings, due to a polyneuritis, developed, which could be cured by a change in diet —Graham Lusk, The Fundamental Basis of Nutrition

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DISPENSARY ABUSE AND CERTAIN PROBLEMS OF MEDICAL PRACTICE *

J WHITRIDGE WILLIAMS
BALTIMORE

It is with great pleasure that I preside over the one hundred and eighteenth annual meeting of the Medical and Chirurgical Faculty of Maryland, and I take this opportunity to thank my friends for the honor which they have conferred upon me The Faculty means more to me than to many, for I was brought up in its atmosphere, and among my earliest recollections are some of the conferences held in my father's home, incident to its reconstitution after the close of the Civil War Consequently, I esteem it a peculiar privilege to occupy the chair which my father once held, and I can assure you that in doing so I recall affectionately many of our departed members, whom some of us can visualize vividly, but who represent mere names to the majority of those present While many of them knew less medicine than we, they strove for ideals which, if anything, were higher than ours, and it is with a sense of reverent affection that I acknowledge my obligations to many of them

I propose to address you briefly on "Dispensary Abuse and Certain Aspects of Medical Practice," a topic which I have selected for two reasons first, because several members of the Faculty have asked me to use my influence to check the so-called abuse, and, secondly, because my interest in medical education has caused me to consider seriously how the medical care of the poor can be best effected in the interest of the community and of the medical profession Furthermore, an apprenticeship of several years as director of the Johns Hopkins Dispensary, and years of service as a member of the Board of Charities of Baltimore City have given me an insight into many of the problems concerned I shall speak frankly on the subject, for, between my grandfather, father and myself, I have behind me the traditions of ninety six years of continuous practice of medicine in this city, which should enable me to face the problem more sympathetically than a mere layman, or even than a physician who bases his conclusions solely on his own experience

During this century Baltimore has grown from a village to a great metropolis, and the practice of medicine has undergone equally great changes

As a boy, I remember that the only specialists in the city were a few men who devoted themselves to the treatment of diseases of the eye, and that every one else, even the surgeons, practiced general medicine, including obstetrics At that time there were few hospitals, and they so crude that no one thought of using them, except the stranger within our gates, the friendless man and the abject pauper Hospital fever still raged, so that the few major operations, which the surgeon thought to be indicated, were performed in the patients' homes The few dispensaries were rudimentary and dirty, and, as their name implied, were places for the dispensing of drugs rather than for the investigation and cure of disease I think that I am safe in stating that fifty years ago no dispensary was equipped for a thorough physical examination of its patients Trained nurses were unknown, but "Sairey Gamps" were familiar figures, and a serious illness was usually followed by the collapse of several female relatives of the patient who had volunteered their willing, but inefficient, nursing services. Organized charity had not been dreamed of, and the beginnings of social service were still a generation distant.

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* Presidential address delivered before the Medical and Chirurgical Faculty of Maryland, April 25, 1916

The town was small, and the physician had a patriarchal sense of obligation to his neighbors and the feeling that he was really a public servant. I know that my father and grandfather held that it was their duty to respond to any call, and to refuse to visit a poor patient from whom a fee could not be expected represented the sin which could hardly be forgiven. Up to the time of his death, my father never refused his services to such patients, and I well remember hearing it said in my boyhood that a certain man, who later attained great eminence in the profession, had a "fine line of darky practice."

With the growth of the city, the expansion of medicine, the development of specialists, and particularly with the extended organization of hospitals and dispensaries, together with the development of trained nursing and the various social agencies, all this has changed, and the old fashioned, kindly and self-sacrificing family physician has disappeared, never to return. Now, except for distinctly personal reasons, no city physician has any hesitancy in refusing to attend undesirable or unremunerative patients, but refers them to the nearest hospital or dispensary, and feels that he will give his charity the next day in the shape of a few hours of hospital or dispensary service rendered under the least onerous conditions. Doubtless the patients are better off and receive more efficient treatment than ever before, but I sometimes wonder whether our moral status is as fine as that of the old worthies who were members of the faculty before many of us were born, and whether it is well for those of us who have attained prominence in our profession to see poor patients only in the wards of the hospital.

These changes in the conditions surrounding the practice of medicine constitute one of the causes of the so-called dispensary abuse. What is the abuse? As I understand it, general practitioners living in the less prosperous sections of the city complain that a certain proportion of persons in moderate circumstances take advantage of institutional facilities, which were primarily intended for the very poor, and thus escape the payment of fees which they might otherwise earn. Again, young men who are perfecting themselves in some specialty claim that large numbers of persons are operated on without charge in hospitals or dispensaries when they could afford to pay a moderate fee.

Undoubtedly both of these conditions obtain to some extent, but in my experience they are less general than is commonly believed, and when they occur they are due less to the desire to escape the payment of fees than to the hope of obtaining better treatment. This opinion is based on the following considerations. In the first place, the prosperity of industrial workers is in general overestimated, as the great majority of married workers scarcely earn enough to support a family with the greatest economy. Scott Nearing has estimated that one half of all industrial workers in this country earn less than $600, and three quarters less than $750 per year, while less than one tenth earn as much as $1,000. In my experience, married workers who earn less than $750 a year cannot afford to make any considerable expenditure for medical services. Consequently, it becomes apparent from the figures just quoted that not more than one fourth of all industrial workers can be involved in dispensary abuse, and I believe that physicians practicing among that class of our population will testify that considerably more than that proportion make an honest attempt to pay for medical services. In the second place, I do not believe that there is much abuse among the small clerk class, as investigation will usually show when its members apply for dispensary aid that prolonged illness or financial reverses have so impaired their ability to pay that they are, temporarily at least, worse off than those who all agree are entitled to assistance. In many other instances they have exhausted their available resources in paying physicians for inferior services, and, as a last resort, go to the dispensary in search of better treatment. On the other hand, I am prepared to admit that a considerable number of patients who could afford to pay a small fee to some young specialist resort to hospitals and dispensaries for free operations.

Consequently, while it may be admitted that glaring instances of abuse are occasionally encountered, it is my experience that the greater part of the so-called abuse is due less to a desire to escape the payment of fees than to the realization that the sick frequently receive inadequate services from their physicians. This is partly the result of poor work by imperfectly educated practitioners, and is partly attributable to the increasing complexity of medical practice, in which the knowledge of one man, no matter how extensive, no longer suffices to establish a diagnosis or to lead to the rational treatment of many conditions. Who can blame a well paid worker or a clerk in modest circumstances for seeking dispensary aid after he has compared notes with less favored friends, who have utilized the services of a well organized dispensary? The former knows that he has been long treated by his physician without relief, and that all he had received for his money was to have his pulse felt, his tongue inspected and to receive a prescription, while the latter will relate that in his case a thorough physical examination had been made, the blood and urine examined, and possibly a Roentgen-ray picture taken or the stomach contents analyzed. The first man must inevitably feel that he has been neglected, while the second realizes that all of the resources of science have been utilized in the investigation of his malady. Whether his symptoms have been relieved is another matter, but until human psychology has radically changed, the result of the comparison is inevitable.

Or, to choose an example from my own work, let us take the wife of a workman whose wages are $15 a week. She is to be confined and expects to pay a fee commensurate with her circumstances. She engages her doctor, who neglects her during pregnancy, attends her at the time of labor, makes a few postpartum calls and sends his bill at the proper time. Later she compares notes with a friend whose husband's wages are $10 a week and who was attended by a well conducted outpatient obstetrical service. She is told that at the first visit to the dispensary a thorough physical and pelvic examination was made, and that a few days later a tactful nurse called at her friend's home and inquired into her conditions of life, advised her concerning the hygiene of pregnancy, and instructed her to return to the dispensary at the end of each month for inspection, advice and a urinary examination. Furthermore, she hears that three days after failing to follow these instructions, her friend received a post card reminding her of her omission, but having postponed the visit the nurse again called, and so impressed the patient with the importance of prenatal care that each month thereafter she gladly went to the dispensary to consult the doctor Then our woman is told that four or five weeks before the expected date of confinement her friend received another visit from the nurse, who called to ascertain whether suitable preparations had been made for the birth of the baby She is also told that the labor was conducted by a bright young doctor, a student and a nurse, and that for the next ten days a daily visit was made by the student and the nurse And finally, that a few days after these visits had ceased, the social service nurse called again to inquire as to the treatment she had received, and to arrange for the supervision of the baby during the following year

When our woman has heard this recital, and has compared the treatment which her friend received for nothing with that for which she paid her physician, can she be blamed for feeling that she did not have a fair deal, and for wanting to become a dispensary patient should she become pregnant again? And are the best interests of the community served if she is prevented from so doing?

Naturally, the physician concerned will reply that the value of his services was far in excess of the fee he had received, that it is not fair for a philanthropic institution to offer services with which he cannot compete, and that it is immoral to educate patients to expect services far in excess of what their means can command Were we concerned solely with the interests of the physician, only one reply would be possible, but, on the other hand, when the subject is approached from the point of view of the community, a different answer must be given for no one not blinded by self interest would contend that it is not highly advantageous for all classes of the community to obtain the best possible medical and nursing care

Accordingly, for the sake of argument, if you please, we shall admit that as dispensaries continue to improve, a larger and larger contingent of the working classes will avail themselves of their benefits, and that the question of dispensary abuse will come to be limited to those who earn more than $2 50 a day Furthermore, the only means of limiting the more extended utilization of dispensaries will consist in hampering their development by lack of means and by the absence of idealism in the conduct of their work

It would lead too far afield to consider critically at this time the proper organization and scope of dispensaries[1] I cannot, however, leave the subject without briefly directing your attention to several points which I believe are fundamental to the organization and conduct of a well regulated dispensary In the first place, it should be an integral part of a well organized general hospital, or, when that is not feasible, it should be closely affiliated with such an institution, so that all the facilities of the latter may be promptly available for the treatment of seriously sick patients The dispensary should be provided with adequate facilities, should have a suitable nursing staff, and above all a well organized social service department, as, in my experience, the work done by the latter adds to the comfort and education of the patients quite as much as the strictly medical service In the second place, poorly run and inadequately equipped dispensaries should not be tolerated and should not receive public support Complaints of dispensary abuse are rarely made concerning such institutions, as they are patronized only by the most ignorant stratum of the community, do little good to their patients and lead to rapid deterioration and loss of clear thinking on the part of their medical staff Furthermore, I feel very strongly that in order to insure a high type of medical work, even in good dispensaries, it will be necessary to pay suitable salaries to all physicians who are expected to give several hours each day to the routine care of patients Otherwise, the work must be done by constantly changing groups of young men, who tend to become slack in interest and attendance as soon as they realize that they have mastered the details of their work

In other words, I am pleading for the maintenance of dispensaries of the highest type, with the knowledge that the better they become, the greater will be the cry of dispensary abuse, which to my mind will not disappear until the conditions of medical practice in our large cities have undergone radical reorganization

I can be much briefer concerning the second variety of dispensary abuse, namely, free operations on persons who can afford to pay a small fee. In my experience this class of patients frequently consult the young specialist in his office and pay a fee for his advice, but when they learn that an operation is necessary they go to a dispensary or hospital As far as I am able to ascertain, one of two motives leads to this action a feeling that the operation will be better and more safely done at the hospital, or a desire to escape the payment of an operative fee In neither event should the patient be treated free, but a mechanism should be devised for the investigation of his circumstances and the charging of an equitable fee by the institution In many cases such a fee will cover only the outlay for anesthesia, supplies, and a few days' stay in the hospital, but in other instances a balance will be left for the payment of professional services Naturally, this balance will be so small that the operator could not accept it as a fee without a distinct loss of self-respect, so that the question arises as to its disposition If the matter were properly handled, I feel that the aggregate of such fees would be considerable, and that such money, along with other available funds, could be utilized for the payment of moderate salaries to the members of the staff who do the work, with the understanding that the salary was in lieu of all fees from patients, except those occupying private rooms at full rates

While such an arrangement would not put the fees into the pocket of the young specialist, who is complaining of dispensary abuse, it would do away with an unjustifiable abuse of charity and would compel the patient to pay what he could afford for operative treatment

With the increasing complexity of medical knowledge, the development of specialists, the necessity for their cooperation in the diagnosis and treatment of many conditions, and the relatively high fees which they are compelled to charge, another serious question arises, and that is, how is the individual of moderate means, who is self-supporting and self-respecting, but who cannot afford to expend $50 to $100 in payment of specialists, to obtain the necessary diagnosis?

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[1] I would refer those interested in this aspect of the subject to the report on The Function of the Dispensary, which was made at the 1916 meeting of the Association of American Medical Colleges

I believe that this will eventually be effected by the establishment of pay dispensaries, somewhat similar to the one inaugurated at the Massachusetts General Hospital in Boston on Jan 1, 1916 In such institutions a group of thoroughly competent young men representing the various specialties will come together on certain evenings each week and will be prepared to examine such patients as may apply The patient should be accompanied by his physician, or at least bring a letter from him asking for a report, and should not be treated except on his direct request A fee of from $10 to $25 should be charged for the complete examination, and the dispensary staff should be compensated either by fixed salaries or by a pro rata division of the fees after a proper deduction has been made for maintenance charges

While the suggestions which I have made may appear radical to some of you, I feel that they barely scratch the surface of the question, and even if adopted, would prove to be but temporary expedients, as I consider that our entire system of treating illness is defective and cries out for radical revision

That something is seriously wrong becomes apparent when a man like Cabot of Boston feels it necessary to contribute to a lay magazine an article entitled "Better Doctoring for Less Money" I earnestly recommend you to read it, as I am sure, whether you agree with what is said or not, that you will admit that the author has put his finger on a sore spot and has raised questions which demand solution

As medicine is now organized, only three classes of our population receive the best institutional care, namely, the rich, the pauper, and those who are willing to abuse medical charity, but no adequate provision is made for the care of the great middle class, which forms the self-respecting backbone of our nation The consequence is that additional terrors have been lent to illness, more particularly when operative treatment becomes necessary for its relief Ask any man with an income of from $1,500 to $4,000 what it cost him to be relieved of his appendix, or to have his wife treated for a complicated nervous breakdown, and you will have the question clearly set before you Only recently a prominent banker told me that I would be surprised, did I not already know, what an appalling condition exists and what a large proportion of our self-respecting citizens are compelled to ask long-term loans in order to tide them over such emergencies The result is that the old feeling of personal friendship for the doctor is fast disappearing, and each year an increasing number of persons come to regard him as one who is likely to take advantage of their necessities I shall not dwell further on this aspect of the question at this time, but I shall return to it before closing

On reverting to the question as it affects the working classes, I feel that the present system of free dispensary and hospital treatment is based on fundamentally incorrect principles As it now is, except for a nominal charge of 10 cents for each prescription filled, the maintenance of such patients is borne by the interest on endowment funds, contributions by charitable persons, and subventions from the city and state, so that for practical purposes the recipients of such aid are as much paupers as the inmates of the poorhouse, the only difference being that the former are temporary and the latter permanent paupers Consider, for example, the case of a workman earning $3 a day Ordinarily he should be able to pay the necessary expenses of himself and his family But let him have a prolonged illness, his pay stops, his small savings are soon exhausted, and he applies to the hospital for relief He is admitted without question as a city patient, if the institution has a contract with the board of charities, and the cost of his maintenance is then borne partly by the city and partly by the institution, which in turn may be the recipient of state aid The individual may not realize it, but he has become a pauper patient, and is the recipient of charity, just as much as the beggar on the streets

For the year 1916 the city of Baltimore and state of Maryland are contributing $1,200,000 for the relief of suffering inhabitants of Baltimore, including the insane and those suffering from tuberculosis, while private philanthropy and charity is giving still more Much good of course is effected by the expenditure of this money, but still larger amounts are necessary if the work is to be well done, yet a large part of it goes to pauperize patients who should in great part be able to help themselves, and this will continue to be the case until some mechanism is developed which will make it possible for the wage-earner and the small-salaried man to accumulate a reserve, during the period of productive activity, which will serve, at least in part, to defray his expenses during illness In other words, I believe that our problem will never approach a definite solution until some form of sickness or health insurance is made compulsory on all who earn less than $1,000 or $1,200 a year

As is well known, such insurance is in vogue in all European states, and is conducted either by the state, or at least is under its supervision In France, Germany and Scandinavia it is voluntary and is conducted by private local societies under the strictest governmental control In Germany the system has been in operation for over thirty years, and while nominally voluntary, is practically compulsory, and covers all persons whose income falls below $625 a year The individual societies are designated as *Krankenkassen,* which are held in bad repute among medical men in this country on account of the difficulties which they have had with the physicians These disputes were in great part inevitable, as the societies were originally managed entirely by laymen from the less intelligent classes, who attempted to ignore the medical profession and to pay as little as possible for its services Latterly, however, a more liberal spirit has become manifest, so that representatives of the physicians practicing in the various communities now take part in the deliberations of the boards of control

From what I have learned by personal inquiry in Germany, as well as from Gibbons' "Medical Benefit in Germany and Denmark," the general effect of this system is excellent, in that the medical needs of the working classes are in great part paid for by their own contributions Moreover, another aspect of the system impressed me greatly, and that is, as the *Krankenkassen* pay, either entirely or partly, the expenses of their members while undergoing hospital treatment, the German working man regards the hospital very differently from the American, and, instead of feeling that he is there on sufferance as a pauper, considers that he is a pay patient and is entitled to great consideration I know that it will surprise many to learn that in autocratic Germany it is not unusual for patients to complain of their treatment, and the influence of the *Krankenkasse* is such as to insure a respectful hearing, and furthermore that such patients cannot be utilized for purposes of instruction, unless they give their consent.

In Russia and England, on the other hand, sickness insurance is compulsory, and the National Health Insurance Act, which Lloyd George forced on the latter country in 1911, is in many respects a model for such legislation, and should be read by all intelligent persons.

Under the act, which Lloyd George prefers to call *health insurance*, as its object is to promote the health quite as much as to provide care for the sick, all persons, with certain exceptions, in receipt of a yearly income of $800 or less must insure. During the period of insurance weekly payments of 9 pence are demanded, of which the state contributes 2 pence, while the remaining 7 pence are paid by the workman and his employer in proportions varying according to the amount of wages. When these are very small the entire contribution is paid by the employer, but when large, entirely by the workman.

The funds are handled in two ways: in great part by acceptable friendly societies, which are under strict governmental supervision, while in the case of persons who are not members of such societies, the matter is entirely in the hands of the government. It would take more time than is at my disposal to go into the details of the scheme, and I shall merely state that it provides for medical, sickness, disablement, and maternity benefits.

Naturally, we are most interested in the medical benefit, and under this the insured are guaranteed medical treatment at the physician's office, in their own homes, or in sanatoriums or hospitals, according to the exigencies of the case, together with such nursing as may be essential, and the necessary medical and surgical supplies. In each community all reputable physicians are entitled to go into the scheme, and such as agree to do so are placed on a panel and are paid according to a fixed schedule for such services as they may render. The insured may select any physician on the local panel and must retain him for a specified period of time, except for good and sufficient reasons, while the physician may refuse to accept any patient he pleases, but once having accepted him must respond to his calls until the time agreed upon has expired.

This system has been in operation too short a time to justify an authoritative verdict as to its merits, but so far as I can ascertain it has proved acceptable to the physicians, as statistics show that over nine tenths of the general practitioners are enrolled on the panels, and, as a result of doing away with gratuitous services, their average income has shown a very considerable increase.[2]

I feel that some such system must ultimately be adopted in this country, and that the question of dispensary and hospital abuse will not disappear until after it has been put into operation. Owing to our political organization, the necessary legislation must be inaugurated by the individual states, instead of being nationwide, as in Great Britain.

Of course it may be urged that legislation of this kind is socialistic, and is contrary to the individualistic tendencies characterizing American life, and could never be carried out in this country. The first objection must be granted, but it is my conviction that it is only along such lines that far reaching plans for the improvement of mankind can be carried out. The second objection, however, does not hold, as a little reflection will convince you that many socialistic or semisocialistic activities have already become engrafted on our civilization without arousing the outcry that they are un-American. Witness, for example, the beneficent effects of state care for the insane in Maryland, and the substitution of well-equipped and humanely conducted state hospitals for the county almshouses. What intelligent person would advocate a return to the old conditions? Yet the former is socialistic and the latter individualistic. Recall, moreover, the various ways in which the state and city have invaded our individual freedom for the good of the community. Think of what the state and city boards of health are doing. Would any one advocate the abolition of full-time health officers, or of attempts to control infectious diseases, or to do away with the infectious disease and tuberculosis nurses of the city health department? Medical socialism has also invaded our schools, but does any one complain that the activities of the school physicians and nurses are un-American? To my mind all of these tendencies are to be encouraged, as fostering the health and happiness of the community, and as a manifestation of the tardy recognition by the state and city of the obligations they owe to the people.

One of the most striking examples of the spread of social legislation consists in the enactment of workmen's compensation laws, which are based on the conception that loss of life and injury to the body in industrial occupations are to be reckoned just as much a part of the cost of production as the wear and tear and replacement of machinery or as the damage to wagons and mules. Up to December, 1915, thirty-one out of our forty-eight states, as well as Alaska and Hawaii, had passed such laws, which have done away with the barbarous doctrine of contributory negligence, and have provided some form of compulsory insurance in the case of injury or death, instead of the employee or his dependents being compelled to resort to the uncertain remedies of the law.

Do you know that the legislature of 1914 passed such a law for Maryland? According to this law, all employers of persons engaged in hazardous industrial work — and the definition of hazard is very broad — are compelled to insure them against accident and death. These policies, which are written either by private corporations or by the state, make provision for medical and surgical treatment, in case of permanent or partial disability, provide for the payment of half wages for specified periods of time, and in case of death, provide for funeral expenses and for the payment of either a fixed sum or an annuity to the dependents. Of course such legislation is socialistic, but what right thinking person would advocate a return to the old method of compensation only after tedious and tortuous legal procedure?

Furthermore, the legislature which has just adjourned has passed a mother's pension law, according to which all dependent widows in the state with minor children are entitled to receive from $12 to $40 each month, according to the size of their families. This legislation has not yet come into force, so that its effect cannot be anticipated, but it affords an accurate indication of the attitude of our lawmakers toward such questions.

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[2] Full information concerning the workings of health insurance in Great Britain may be obtained from the fourth edition (1914) of Carr, Garnett and Taylor's monumental work on National Insurance, while a short but accurate sketch is contained in the Report of the Judicial Council of the American Medical Association, published in the Bulletin for May 15, 1915.

One of the most interesting developments along these lines was the decision in 1909 of the Metropolitan Life Insurance Company to provide its industrial policy holders with free visiting nursing services during illness. Baltimore was one of the first cities in which the experiment was tried, and a contract was made with the Instructive Visiting Nursing Association to care for sick policy holders at so much per visit. This service has rapidly grown, and the company states that during the year 1914, 1,060,288 nursing visits were paid in this country and Canada at an expense of $527,861. While it is not permissible to scrutinize too closely the motives which induced the company to embark in the enterprise, it has doubtless saved much money by shortening the duration of sickness, and at the same time it has indicated an excellent method of improving the condition of the community, as the nursing service, in addition to adding to the comfort of sick policy holders, must exert a widespread educative influence.

I think, therefore, that it can be fairly claimed that the instances just adduced give a fair indication of the trend of social legislation in this country, and that I am not alone in my advocacy of some form of health insurance is shown by the fact that Dr. Alexander Lambert, in the report of the Judicial Council of the American Medical Association last year, stated that the question was not merely of academic interest, but predicted that it might at any time become a burning professional problem.

This prediction has in part come true, for in November, 1915, the social insurance committee of the American Association for Labor Legislation prepared a tentative draft of a health insurance bill to be submitted to the New York legislature, and which was also intended as a tentative model for other states contemplating such legislation. The committee consisted of ten members, and included such men as Drs. Alexander Lambert and S. S. Goldwater, and Messrs. Ed. T. Devine and I. M. Rubinow, the latter being a statistical expert and the author of numerous works on the history of social insurance. It would lead too far to attempt to discuss the provisions of this bill in detail, and I can only summarize its most important features.

The draft provided that all persons earning less than $1,200 must be insured, and recommended that one fifth of the yearly premium be borne by the state and the remainder equally divided between the employer and the employee. The committee estimated that the premium necessary to provide for the family would amount to 3 or 4 per cent. of the income, and calculated that $24 paid in behalf of a workman earning $600 a year would suffice to provide the following benefits: (1) medical, surgical and nursing benefit, (2) medical and surgical supplies, (3) hospital treatment, (4) cash benefit (two thirds of wages), (5) cash benefit to dependents, (6) maternity benefit, and (7) funeral benefits. After carefully weighing the pros and cons, the committee decided that in so large a state as New York it would probably be better to have the details administered by local approved societies, under strict state supervision, rather than by a central state organization, although it was clearly realized that the latter would present many advantages, particularly in the direction of uniform administration.

If some such system were put into effect in Maryland I imagine that it would operate somewhat as follows in Baltimore City. In the first place, a panel of physicians would be formed, just as in England, and a schedule arranged for their compensation. The entire city would then be divided into a number of insurance districts, each comprising so many thousand insured persons. In each district there would be a thoroughly organized dispensary with a competent paid medical staff representing the various branches, adequate nursing facilities, and a social service organization. If possible it should be connected with a hospital, but if not, the necessary affiliations could be made. The dispensary should also house representatives of the various philanthropic and social agencies, and provide quarters for the local administrators of the health insurance fund, as well as for a substation of the health department. In other words, it would represent a community health center, and from it should radiate all the medical and socialized activities of the district.

The care of the patients might be organized somewhat as follows: Each insured family would be allowed to choose as its medical attendant any physician on the panel living within a certain radius. In cases of minor illness the patient would visit the physician in his office or go to the dispensary, while in more serious cases he would go to the dispensary for diagnosis or treatment. If the patient were ill in bed, he would be cared for at home by his medical attendant and a visiting nurse, or sent to the hospital if the physician deemed it advisable.

Under such a system there would be no possibility for dispensary or hospital abuse, as the expenses would be borne by the insurance fund and indirectly by those insured, no matter whether the patients were treated at home or at the dispensary or hospital. Nor would the doctor suffer. As probably two thirds of the residents of each district would be in the insured class, large numbers of physicians would be necessary for the conduct of the dispensary and hospital, and as they would be paid for such services, as well as for visiting the patients in their own homes, and would have no bad bills, they would probably consider it a matter of indifference where the patients were seen.

It is my conviction that a plan conducted somewhat along these lines would result in greatly improved medical service for the insured class, and at the same time would tend to elevate the professional standard of the physicians, as they would be stimulated by constant contact with the accurate work of the dispensary and hospital, instead of feeling, as is now so often the case, that their interests are antagonistic.

This would mean that the great majority of physicians would become state officials and would devote their entire time, or at least a considerable proportion of it, to their official duties, and that the present type of medical service would be available only for the rich and for those in comfortable circumstances.

To many here present, I am sure that such a proposition appears as a Utopian socialistic dream, but I am convinced that if I live to a moderately old age I shall see some such scheme in operation. When health insurance comes to be seriously talked of in Maryland, I hope that it will be faced as a state-wide proposition, and that this faculty will do its part toward drafting satisfactory legislation, and if the law provides that the plan shall be put into effect and administered by a commission, that we shall see that it is stipulated that at least one third of its membership shall be physicians elected by this body, very much as the members of the State Board of Medical Examiners are chosen. If some such arrangement is not made, and the administration of the law is entrusted entirely to laymen, I can foresee years of just such trouble as Germany is now recovering from There is one other point which I regard as fundamental, and that is that in this country no plan will be acceptable which does not guarantee to the insured a reasonably free hand in the choice of the attending physician

Such dreams may seem far removed from the solution of the problems of dispensary and hospital abuse, but until they are fulfilled, I see no prospect of checking it, but on the other hand, every probability that it will expand as the dispensaries and hospitals become more efficient and the practice of medicine more complicated

One word more and I have done The remedies here suggested will care for the industrial worker, the school teacher and the small clerk, while the well-to-do can take care of themselves But what about the person in moderate circumstances, who wants to pay for what he gets, but at present finds it difficult to do so? For his ordinary illnesses he can continue to employ the present type of practitioner, for his troubles do not commence until diagnostic difficulties occur, or a surgical operation or prolonged stay in a hospital becomes necessary

I believe that the final solution of this aspect of the problem will ultimately be found in the development of a new type of hospital, in which the substitution of cubicles for the expensive private room will make a moderate charge possible In such institutions a mechanism should be developed by which the fees for professional services will be automatically regulated in accordance with the patient's financial standing If this were combined with a cooperative diagnostic institute with moderate inclusive fees, sickness would lose the additional terror of financial pressure which of late years has been imposed upon it

THE DUODENAL TUBE AS A FACTOR IN THE DIAGNOSIS AND TREATMENT OF GALLBLADDER DISEASE *

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As a rule, we can say that the nearer we get to an organ and the fluids within it, the better we can deal with it diagnostically and therapeutically The duodenal tube has brought us to Vater's papilla It enables us to obtain the secretions from this important source in a direct manner It also allows us to instil fluids in its immediate vicinity and thus exert a beneficial influence on the tissues in its neighborhood

About two years ago[1] I discussed the subject of the direct examination of the bile as an aid in diagnosis In the present paper I intend to give my further experiences regarding this point in gallbladder diseases, and then speak on the treatment of these affections by means of the duodenal tube

Since May, 1914, I have diagnosed probable cholecystitis by the direct examination of the bile in conjunction with the usual symptoms in forty cases Thirteen patients with cholecystitis and allied diseases, whose bile was directly examined, were operated on Outlined reports of the latter cases are given in the accompanying table

Of the thirteen patients operated on, eight had stones in the biliary apparatus, one of the latter showed clear bile, while the other seven presented a turbid state of the duodenal fluid Five of the patients operated on, with turbid bile, had no stones two of these had malignant tumors, one of the liver, the other of the stomach and pancreas One had tuberculous peritonitis and adhesions over the gallbladder, one chronic appendicitis, and one hour-glass contraction of the duodenum below Vater's papilla

In the majority of cases in which turbid bile is found in the duodenum in the fasting condition, cholecystitis with gallstones is encountered Turbid bile may, however, exist without gallbladder disease, when the liver itself is seriously diseased (neoplasms or echinococcus of the liver or high grade cirrhosis) or in stricture of the duodenum below the papilla of Vater

On the other hand, clear bile may exceptionally be found in association with biliary calculi There are two possibilities Either the gallbladder is not inflamed, notwithstanding the presence of the stones, or the gallbladder is entirely filled with the calculi In this case no bile enters the organ, and it therefore appears in the duodenum in the same state as excreted by the liver, without any admixture of the gallbladder secretions Such occurrences, however, are rare

In any event, the macroscopic appearance of the bile is of great import in the diagnosis of gallbladder disease or grave diseases of the liver A clear golden yellow bile speaks well for the functions of these two organs, while a turbid, greenish or dark brown looking bile, perhaps mixed with mucus, speaks for a diseased state of either the gallbladder or liver or both Again, in gallbladder affections the bile is liable to change in character, for its turbidity, when present, is then due to an admixture given it during its sojourn in the vesicula fellis In permanent affections of the liver we can expect a stationary appearance of the bile, as its character is given it at the place of production

The diagnosis of cholecystitis or cholelithiasis cannot be made from the appearance of the bile alone The latter, however, in conjunction with the other clinical signs, will be of great assistance in establishing a correct diagnosis

As the duodenal contents change very quickly in appearance, it is essential to examine them immediately after withdrawal In order to preserve a specimen for demonstration or later consideration, an artificial reproduction of the sample by means of anilin dyes can be made I use for this purpose these stock solutions (1) yellow (MXX), (2) red (eosin), (3) naphthol green anilin, (4) nigrosin black, (5) methyl blue, and (6) French chalk and water

A small vial is filled two thirds with clear water, and as much of the yellow to correspond with the sample to be represented is added Thereupon is added whatever mixture is needed red to represent a brownish tint, green to effect greenish discoloration, and French chalk to imitate turbidity After a little practice the imitated samples will resemble more closely the real contents These artificial samples can be kept indefinitely without change, and will bring back to memory the exact appearance of the original fluid, immediately after its withdrawal from the duodenum

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* Read before the American Gastro Enterological Association, Washington, D C, Ma[illegible] 8, 1916

[1] Einhorn, Ma[illegible] Direct Examination of the Duodenal Contents as an Aid in the Dia[illegible]osis of Gall Bladder and Pancreatic Affections, Am Jour Med Sc, Octo[illegible] 1914, p 490

We now come to the use of the duodenal tube in the treatment of gallbladder lesions In a number of patients with cholecystitis an attempt was made to instil either a weak solution of ichthyol or argyrol into the duodenum just above Vater's ampulla This I did first in catarrhal jaundice, later also in other minor affections of the gallbladder, not requiring surgical aid The plan of this mode of treatment is based on the idea that an astringent effect on the duodenum and the papilla of Vater will exert a beneficial effect on the bile duct The clinical experience seems to favor this view

The mode of treatment is carried out in the following way The patient is given the duodenal tube either

CASES IN WHICH THE DUODENAL CONTENTS WERE EXAMINED PREVIOUS TO OPERATIVE INTERVENTION

Case	Name	Diagnosis	Examination of Duodenal Contents				Appearance of Duodenal Contents	Microscopic Examination of Duodenal Contents	Remarks
			Date	Amylopsin mm	Steapsin mm	Trypsin mm			
1	Mrs L	Icterus due to obstruction of common duct cholelithiasis	9/21/13	8	Trace	0	Slightly reddish no bile		At operation stone found in the common duct
			9/22/13	0	5	Trace			
2	Mr H D	Cholelithiasis	4/27/14	15	1	2	Yellowish turbid		Gallstones found at operation
3	Mr H. Jr	Cholelithiasis	11/27/14	6	15	20	Turbid milky yellow alkaline		Operated on 1/14/15 gallstones found
			1/12/15	8	2	1	Yellow green turbid alkalinity = 10		
4	Mr H E	Ulcus ventriculi and cholecystitis	11/25/14	4	25	3	Golden yellow clear alkaline		Operation gallstones found also ulcer of the stomach
			12/7/14	5	15	5	Golden yellow clear Alkalinity = 40		
			12/10/14	4	1	0.5	Yellow alkaline alkalinity = 15		
5	Mr L.	Cholelithiasis icterus gallbladder filled with stones and palpable	11/10/14	10	0	1	Watery turbid alkalinity = 55		Operation stones removed
			11/14/14	4	0	1	Greenish yellow		
			11/16/14	10	4	1.5	Yellow turbid neutral		
6	Mrs P	Icterus obstructive jaundice chronic pancreatitis	1/4/16	0	6	0	Clear watery	Few bile stained epithelial cells	Operation big stone found in the hepatic duct
		Postoperative biliary fistula	1/11/16	0	0	0	Turbid dark blackish green alkalinity = 10		
7	Mr M.	Cholecystitis	1/22/16	2	0	6	Yellow slightly turbid alkaline		Operation tuberculous peritonitis
			1/25/16	0	0	0	Whitish no bile neutral		
8	Miss G	Cholelithiasis pancreatitis	3/28/16	0	2	1	Dark greenish yellow turbid alkalinity = 10	Swarming with micrococci and bacilli	Operation enlarged gallbladder 2 large stones head of pancreas indurated
		Postoperative biliary fistula	4/17/16	0	2	0	Dark golden yellow alkalinity = 85		
9	Mr K.	Cholecystitis	3/14/16	8	6	6	Yellow tinged with green turbid alkalinity = 10	Few cholesterin crystals bilirubin crystals leucin crystal epithelial cells	Operation tumor of left lobe of the liver
10	Mr D	Neoplasma ventriculi et pancreatis	9/11/13	5	3	4	Brownish green alkalinity = 40		Operation tumor of stomach encroaching on the pancreas
			9/15/13	8	3	2	Brownish turbid alkaline		
11	Mr C	Cholecystitis chronic appendicitis X ray diagnosis defect in pyloric region probably cancer	4/16/15	7	2	5	Yellow turbid alkalinity = 75		Digestive test capsule after 29 hours potato catgut fat trace present thymus and nuclei partly present Operation 4/23/15 negative appendix removed
12	Mr T	Cholecystitis..	3/28/16	4	0.5	1	Greenish yellow cloudy alkalinity = 45	Filled with micrococci and bacilli	Operation 4/21/16 hour glass contraction of duodenum below Vater's papilla
			3/30/16	10	2	4	Dark green (methyl blue) alkalinity = 0	Cercomonas hominis present	
			4/19/16	6	4	5	Dark brown tinged with yellow green Alkalinity = 50 rennet +	Numerous bilirubin calcium crystals cholesterin crystals of irregular shape few bacteria epithelial cells	
13	Mrs K.		4/29/16	5	1	0	Light yellow not turbid alkalinity = 20		Operation 5/5/16 gallbladder enlarged sausage like containing about 150 c c 2 stones found in gallbladder and cystic duct
			5/4/16	4	3	3	Yellow tinge of green turbid alkalinity = 20		

at night before retiring, or about 5 a m He takes it with a glassful of water About 8 or 9 a m the patient is then examined in the fasting condition, and the position of the capsule end of the tube ascertained If found in the duodenum, the tube is slightly withdrawn (about 1 inch), so that Mark III is outside of the lips The barrel of the syringe is now filled with a 0 25 per cent argyrol solution (blood temperature), and the latter instilled into the duodenum by raising it As soon as the contents disappear, the barrel is refilled with the same solution, and now the tube is pulled out about 1 or 2 inches more and the instillation repeated From 20 to 30 c c of this solution may be thus injected Ichthyol may be given in the same manner I have used this mode of treatment every other day in a number of cases with benefit

Among the many cases of duodenal alimentation carried out, mainly for the relief of gastric or duodenal ulcer, there were quite a number of patients (twenty) who had gallstones at the same time (This diagnosis was made by the clinical history and symptomatology, in some by positive Roentgen findings, and in some by the passage of calculi) The latter were benefited not only with regard to their digestive disorders but also in reference to their gallbladder condition This occurred in a striking manner in such frequency that I feel inclined to attribute to the duodenal alimentation a decidedly beneficial influence also on the gallbladder lesion

This might be explained by the partial rest afforded the liver in keeping the portal supply at low ebb The improved condition of the liver, in turn, acts beneficially on its appended organ, the gallbladder

The duodenal alimentation will, therefore, find an appropriate place in some forms of cholecystitis, particularly when complicated with ulcers of the stomach or duodenum

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ACIDOSIS IN DIABETES *

R T WOODYATT, M D

CHICAGO

THE ABSENCE OF A SHARP LINE OF DIVISION BETWEEN DIABETIC AND NONDIABETIC STATES

As a basis for the discussion of acidosis occurring in diabetes, I will first develop certain views regarding the points of difference between a diabetic and a nondiabetic individual and then return to the subject proper

In the normal individual there exists a proportionality between the rate at which glucose is utilized or stored, and the rate at which it is excreted unchanged in the urine This proportionality differs with different rates of glucose supply to the cells When the rate at which glucose is brought into the tissues from both external and metabolic sources is below a certain minimum (expressed in terms of the weight of glucose per unit weight of tissue and unit of time), nearly all the glucose is utilized or stored, and only a trace escapes in the urine unchanged When the rate of glucose supply to the cells (from both external and internal sources) is above this minimum, then the percentage of wastage increases rapidly, and when the rate of supply rises above some 3 5 gm per kilogram per hour, as it can be made to do by intravenous administration, then, in a normal, well-nourished individual, from 35 to 50 per cent may be excreted[1] Under these conditions a normal individual is, as it were, from 35 to 50 per cent diabetic, and he has the intense glycosuria, polyuria and thirst found in a genuine case of diabetes with a lower rate of glucose supply

In cases of so-called "total" human diabetes there also exists a proportionality between the rate at which glucose is stored or utilized, and the rate at which it escapes in the urine, as in health, this proportionality varies with the rate of glucose supply to the cells (the grade of the diabetes and other factors remaining the same) If the rate of supply is below a certain minimum, then, as in health, most of the glucose supplied is stored or utilized, and only a trace appears in the urine

The so-called "total" diabetic differs from the normal person only in the fact that this minimum is absolutely lower than in health In order to reduce the rate of glucose supply to the cells below the minimum necessary to make a case of so-called "total" diabetes free from glycosuria, it is necessary to stop entirely all intake of sugar and sugar-forming elements in the form of food, and also to cut down the rate of endogenous glucose formation This means fasting and rest with the exclusion of cold and every other influence which may stimulate metabolism Fasting, rest and warmth, however, do not wholly stop the endogenous formation of glucose They only decrease it As Lusk has pointed out, during a fast, glycogen reaccumulates in dogs which have previously been deglycogenized by the use of phlorizin plus cold or epinephrin, a fact which we have several times confirmed In these cases the glycogen comes, for the most part, from the protein metabolism which persists during fasting Yet uncomplicated cases of "total" human diabetes become nonglycosuric during a fast in spite of this endogenous glucose supply

Cases of severe diabetes rendered nonglycosuric by fasting, rest and warmth lose all the ordinary symptoms of diabetes, even the respiratory quotient rising to a degree which suggests some glucose utilization This latter effect has been shown by Benedict and Joslin and by Du Bois

It is accordingly clear that the state of every normal individual becomes diabetic when the rate of glucose supply to the cells is high enough, and every case of human diabetes passes into the nondiabetic state when it is possible to make the rate of glucose supply to the cells low enough The difference between a "total" diabetic, so called, and a healthy person is purely relative

ACIDOSIS IN GENERAL

Returning now to the subject of acidosis, I would emphasize the point that acidosis in diabetes occurs under the same fundamental conditions and conforms to the same general laws which pertain to acidosis in nondiabetic individuals That particular type of acidosis which is so commonly seen in the severer cases of diabetes, the type characterized by the appearance in the blood and urine of beta-ketobutyric and beta-hydroxybutyric acids and acetone, might appear to have laws of its own and to differ specifically from the same type of acidosis when seen in nondiabetics during the course of simple fasting or one-sided diets

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* Read before the Association of American Physicians, Washington, D C, May 8, 1916

[1] These statements are based on studies with sustained intravenous injections of sugars carried out by Sansum, Wilder and Woodyatt, 1915 and 1916 These studies are in part unpublished

The writings of certain authors would encourage this idea, but the difference is only a matter of degree

Our knowledge of diabetic acidosis began with Hallervorden's discovery of increased quantities of ammonia in the urine in cases of severer diabetes Previous experimental studies by Hallervorden and Coranda having demonstrated that an increase of urinary ammonia was commonly associated with an increased excretion of acid radicals, it was suspected that this might be the case in diabetes Following the idea that the increase of urinary ammonia might signify an increased excretion of the ammonium salts of unknown acids, Stadelman and Hallervorden proved that large quantities of alpha-crotonic acid could be distilled from acidified diabetic urine, this acid arising from the decomposition of beta-hydroxybutyric acid, as was later shown by Külz and Minkowski It was to this condition that the term 'acidosis" was first applied, and, in this paper, for the sake of convenience, the term will be used in this original sense, although it is clearly recognized that an increased production and excretion of acid radicals partly combined in the form of ammonium salts is not inevitably associated with an increased hydrogen ion concentration in the blood or with a depletion of the blood bicarbonate, because, if the body is adequately supplied with suitable bases during the course of the acidogenic process, the latter phenomena need not develop

ORIGIN OF THE ACIDOSIS COMPOUND

It is at present common knowledge that beta-hydroxybutyric acid and its two congeners, beta-ketobutyric acid and acetone (known collectively as the "acidosis compounds" or "acidosis bodies" in accordance with Naunyn's suggestion, and less aptly as the "acetone bodies," after Geelmuyden), arise from products formed in the catabolism of fats and proteins and more specifically from certain of the lower fatty acids containing an even number of carbon atoms, in particular, perhaps, butyric acid The chemistry of the formation of these lower fatty acids from the higher fatty acids and from certain of the amino acids, as well as the mechanism by which the lower fatty acids are converted into the acidosis compounds, cannot be discussed here

CONDITIONS FAVORING THEIR APPEARANCE

It has long been known that one fundamental prerequisite for the accumulation in the tissues and subsequent excretion of abnormally great quantities of the acidosis compounds is a relative diminution in the rate of carbohydrate utilization When, for any reason whatsoever, the rate at which glucose is utilized in the body falls below a certain minimum, relative to the rate of the fat and protein catabolisms, then the acidosis compounds appear in the blood and urine It is worthy of emphasis that, when we speak of a decreased rate of carbohydrate utilization in this connection, we should have in mind specifically the catabolism of *glucose* and think, not merely of an *absolutely* decreased rate of glucose catabolism, but of a diminution *relative* to the existing rate of lower fatty acid (for example, butyric acid) oxidation

In 1914 Zeller[2] fed patients isocaloric, nonprotein diets He varied the proportions of fat and carbohydrate and first noted an increased output of ammonia when the proportion of carbohydrate was less than 1 part by weight to 4 parts by weight of fat He reckoned that for the complete utilization of two molecules of the fat which he employed, at least one molecule of glucose must oxidize at the same time Lusk suggests rereckoning these results somewhat as follows Two molecules of fat can yield by saponification six molecules of fatty acid and two of glycerol The two molecules of glycerol can yield in the body one molecule of glucose Adding this to the glucose derived from the diet directly, it would appear, if we accept Zeller's results (and leave out of consideration for the moment the protein metabolism), that six molecules of higher fatty acid required for their complete oxidation the simultaneous utilization of at least two molecules of glucose One might accordingly say *When the mixture of metabolites oxidizing in the body contains more than three molecules of higher fatty acid to one of glucose, then the body "smokes" with acidosis compounds like an automobile with too much oil in the cylinders* It follows that some equally definite but not identical, relationship exists between the number of glucose molecules necessary for the complete utilization of a given number of molecules of a lower fatty acid, such as butyric acid

ACIDOSIS IN FASTING

During a period of fasting the cells naturally continue to oxidize foods Before the fasting begins, the proportions of fat and carbohydrate catabolized are determined roughly by the proportions of fat and carbohydrate in the diet supplied from the outside world After fasting begins, the proportions of fat and carbohydrate catabolized must be fixed by the proportions in which these stuffs are supplied from the tissues themselves The cells will be fed with what there is, and the proportions in which they catabolize carbohydrate and fat during starvation must therefore depend in the end on the proportions in which these stuffs have been stored R M Lang[3] has confirmed these principles by direct experimental studies

It is accordingly clear how, with respect to acidosis, fasting may produce a variety of effects in different individuals depending on how their bodies may assay for fat and glycogen at the time fasting begins, and this must depend to a large extent on the previous diet

A person in whom there is no appreciable fat and only a trace of glycogen will necessarily during a fast subsist wholly on body protein It is very doubtful whether this is productive of any acidosis of the type we are discussing, because from 45 to 58 per cent of the protein is capable of conversion into glucose, and of the remaining 55 to 42 per cent , only a fraction consists of ketogenic amino acids, that is, of amino acids capable of yielding acidosis compounds Unless something interferes with the oxidation of the glucose derivable from protein, this glucose probably suffices for the complete oxidation of the ketogenic fraction of protein This also would seem to be verified by the experiments of Lang On the other hand, if the body at the beginning of a fast contains a considerable glycogen reserve and also a normal amount of fat, we would expect at first no significant acidosis because there would be at first enough glycogen for the proper burning of the fat But later, since the glycogen reserves tend to run low sooner than the fat reserves, we might expect an increasing preponderance of fat in the metabolism, and hence a rising acidosis

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[2] Zeller Arch f Physiol. 1914 p 213

[3] Lang R M. Biochem Jour 1915 ix 456

If the fasting were pushed until the fat reserves were also depleted, one might again anticipate a decline of the acidosis as the metabolism returned to an almost purely protein basis. Again, if the body at the beginning of a fast contained an excess of fat *in proportion to the glycogen*, a quicker and higher acidosis during starvation than in a strictly normal person would not seem strange. Perhaps the sudden and sharp fasting acidosis observed by Folin in the obese is due simply to the fact that these persons, thrown back on a diet consisting of their own tissue materials, find them excessively fatty. But of course it is conceivable that two bodies containing the same amount of fat might during a fast use it with different degrees of rapidity.

ACIDOSIS IN DIABETES

Acidosis develops in diabetics under exactly the same fundamental conditions which cause acidosis in nondiabetics. In diabetes however, owing to pancreatic insufficiency, the *maximum rate* at which glucose can be oxidized in the body is fixed at some level which is absolutely lower than in health. The limited amount of glucose which the diabetic can oxidize per kilogram of body weight per unit of time fixes the amount of fat which he can oxidize (without developing acidosis) during the same time. He can burn only about four times as much fat as carbohydrate without developing acidosis. It therefore happens that in the severer cases of diabetes a rate of fatty acid metabolism, which in the absolute sense is not greater than what might occur in health, becomes excessive in proportion to the amount of oxidizing glucose, and so acidosis develops.

In order to check a diabetic acidosis, it is necessary to restore the proper ratio of fatty acid to glucose oxidation by reducing the fatty acid metabolism to whatever level is fixed by the existing rate at which glucose is oxidizing. In diabetes, protein alone, if metabolized in sufficient amounts, may be productive of acidosis as well as fat, because, although protein in breaking down liberates plenty of glucose for the complete oxidation of its own ketogenic fraction, in diabetes not all of the glucose so formed can be oxidized, owing to the lessened ability of the body to *split it open*. *Accordingly, to check a diabetic acidosis* it is necessary to reduce both the protein and the fat metabolism. Fasting, rest and warmth accomplish this, and it is easy to understand how this procedure might cause a reduction of acidosis in many cases of diabetes, just as the same treatment causes a cessation of glycosuria. The fact that it *commonly* does so is well verified by the recent studies of Allen, Stillman and Van Slyke.

It would not be expected, however, that in diabetics, any more than in nondiabetics, fasting would always have exactly the same effect on acidosis. We should always have to consider what the previous diet of the diabetic had been and how his body would assay for fat and glycogen at the beginning of the fast, not merely the amount of glycogen (as stated by Allen in a recent quotation from the work of Landergren and Forsner), but the relative quantities of both glycogen and fat.

If the diabetic patient were emaciated and his body contained little fat, fasting would be equivalent to throwing him on almost purely protein metabolism, and unless some toxic factor maintained too high a rate of protein metabolism in spite of the fasting, we should not expect a *fasting acidosis*. For probably protein alone does not cause acidosis if all the glucose derived from it is oxidized, and when the absolute rate of protein metabolism sinks low enough, even the severest cases of diabetes can oxidize all the glucose that is formed from protein. This follows from what was said at the beginning of the paper. In a case recently studied by Geyelin and Du Bois, fasting caused a marked diminution of the acidosis even while the protein metabolism was relatively high and the G:N ratio in the urine was still 3.65:1. The fasting in this instance doubtless served to cut down the great preponderance of fatty acids in the metabolic mixture, leaving the patient more nearly on a purely protein metabolism. This case, as Geyelin and Du Bois remarked, gave evidences of a toxic (*infectious*) factor which served to keep up a relatively high rate of protein metabolism in spite of fasting. Hence the persistent glycosuria with some acidosis.

I have not been able to share the view expressed by some, that the lessening of diabetic acidosis during starvation is in any sense paradoxical, or to see the truth of generalities to the effect that fasting lowers acidosis in diabetics while in nondiabetics it causes acidosis. Our own experience is that diabetics have acidosis about as soon and in about the same degrees as nondiabetics *when there is reason to think that they are metabolizing similar mixtures of foodstuffs during the fasting*.

Fasting will lower acidosis either in health or in diabetes *if it has the effect of stopping a one-sided metabolism and throwing the tissues on a more nearly balanced ration of fatty acids and glucose*. To be sure, diabetics far and wide are much more likely to have lost a considerable part of the body fat, and so in fasting they are more frequently thrown back on an almost purely protein metabolism of low absolute magnitude. This is not a condition productive of acidosis. *But normal persons in comparable states of nutrition behave in exactly the same manner*. And if diabetics are very fat it may happen that fasting results in a persistence, yes even in a sharp increase of acidosis, as it does with the nondiabetic obese. In this connection it should be recalled that in every case of severe diabetes, if the patient receives any diet whatsoever, he promptly loses most of that which is already carbohydrate or which can be converted into carbohydrate in the body, and the tissues are left on what is tantamount to a purely fat diet. Fasting in the case of severe diabetes, therefore, is in effect comparable to the discontinuance in health of a heavy diet consisting wholly of fat.

In perfectly normal persons it is not possible, by the use of ordinary foods and methods of feeding, to cause excretions of acetone beta-ketobutyric and beta-hydroxybutyric acids in such amounts as may occur with similar diets in the severest forms of diabetes, even if the nondiabetics receive forced feedings consisting wholly of fat. This is due primarily to the fact that in normal persons, even on such diets, the rate of oxidation of glucose derived from body protein and from glycerol is considerable and suffices for the complete oxidation of some of the fatty acid, and secondarily, to the fact that there is a limit to the height to which the fat metabolism can be driven by fat feeding, a limit fixed by the limited rate at which fat can be absorbed from the bowel, no matter how much may be fed. Wherefore, it is impossible by fat feeding in health to create so *wide* a discrepancy between the fatty acid and the glucose oxidation rates as that which can occur in diabetes Nevertheless, the fat-fed person may develop a far greater surplus of fatty acids in the metabolic mixture while on a wholly fat diet than the same person will have during a fast, particularly if he happens to be a lean subject Moreover, if the fat-fed person fasts, the acidosis diminishes or wholly disappears This phenomenon is the equivalent of the cessation of acidosis during a fast in diabetes

Similar comments might be made concerning the increase of the respiratory quotient As fasting in diabetes frequently leads to a lessening or disappearance of acidosis, by cutting down the amounts of fatty acids in the metabolic mixture until even such little glucose as still smolders in the cells suffices for their complete combustion, so fasting in diabetes might be expected, under the same conditions, to cause at least *some increase of the respiratory quotient* While the patient is being fed and the metabolism is running high with a very great preponderance of fatty acids undergoing oxidation, the absolute quantity of glucose oxidizing is too small to be recognized in the respiratory quotient by existing methods, but usually as the total metabolism drops and drops chiefly by virtue of an absolute and relative lessening of the fatty acids, the percentage of glucose in the mixture rises correspondingly Althought the total metabolism is now low, the percentage of carbohydrate entering into it is increased, and there must be some increase of the respiratory quotient for this reason alone

Occasionally we have encountered diabetic persons in whom the acidosis has shown anomalous variations difficult to explain in terms of the proportions of glucose and fatty acids undergoing simultaneous oxidation in the body as a whole How are these variations to be interpreted? Dr Howland has spoken of acidosis occurring in infants without diabetes and in spite of balanced diets Analogous phenomena may be seen in certain types of infection in adults, notably in the so-called "milk sickness" studied by Jordan and Harris, and in some streptococcus infections, especially it seems to me in migrainic or hepatargic cases In such instances there need be no disproportion of glucose in the diet, the acidosis may antedate the abstinence from food, and there is no proof of a disability on the part of the body as a whole to utilize glucose

It is here interesting to consider the question of where in the body acetone, beta-ketobutyric and beta-hydroxybutyric acids are chiefly formed, and where under ordinary conditions glucose exerts its normal antiketogenic effect There are ample experimental reasons for assuming that the greater proportions of all the acetone bodies formed in the body are created in the liver and muscle cells The liver especially, if we may judge from perfusion experiments, seems to constitute the largest acetone factory and the principal site of the normal interaction between oxidizing fatty acids and oxidizing glucose In such cases of acidosis we might therefore think of infections or of inherited abnormalities, or of both together, affecting particularly the liver cells and so preventing locally that reaction between oxidizing glucose and fatty acids which normally inhibits any considerable accumulation of the acidosis compounds How such an interference might be effected is a question which would involve a detailed discussion of the nature and the mechanism of the phenomena known as "antiketogenesis" This time prohibits

Whatever the mechanism in these cases may be, it can be assumed with safety that no person, merely because of an accident to the pancreas of such a nature that symptoms develop which justify a diagnosis of diabetes, will by virtue of this accident become immune to infections There is accordingly reason to expect that occasionally a person who happens to have a subnormal endocrine function of the pancreas may also develop an infection of the kind mentioned, and that this may start an acidosis, or, if an acidosis is present already, augment it

It would seem desirable in all discussions of acidosis in diabetes to make a clear distinction between true diabetogenous acidoses and nondiabetogenous acidoses occurring by accident in diabetic individuals

104 South Michigan Avenue

LARGE ENDOTHELIOMA OF THE DURA COMPRESSING BOTH FRONTAL LOBES *

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Neurologic literature is rich in reports of cases of tumors of one frontal lobe, but reports of involvement of both frontal lobes are rare

CASE REPORT

F P, woman, colored, aged 30, a domestic, admitted to Dr Abrahamson's service of the Central Neurological Hospital, June 23, 1915, complained of severe frontal headache, blindness, difficulty in walking, weakness and incontinence The family history and antecedent personal history were unimportant. Her habits were good She was well up to five months previous to admission, when she began to have frontal headaches and pains in the eyeballs These pains were constant and became progressively worse Her vision at first was dim, and two months before entrance she became totally blind. At this time she began to vomit her food her memory began to fail, locomotion became awkward, and just prior to admission she became incontinent All these facts were obtained from the patient.

The patient was found on examination to be well developed and moderately well nourished She was totally blind, and the head was bent forward hanging loosely and at times swaying to and fro in an anteroposterior direction, that is nodding The temperature was 98, the pulse rate 68 with the patient standing, 60 when sitting, and the pulse was small in volume and regular The respiration was 16 per minute and regular The systolic blood pressure was 120 diastolic 85 The tongue was moist and coated and had a fine, regular tremor The hands were dry The heart, lungs, abdomen and pelvis were negative. The skull was normal

Innervation was equally poor on both sides, and was also poor on the forehead Deglutition mastication and articulation were normal The voice was nasal, and the speech whining in character The expression of the eye was vacant, and the eyeballs were protruding and tender, both equally so Von Graefe s sign was present, and also slight nystagmoid movements in the vertical direction No strabismus and no ptosis were found The pupils were widely dilated and unequal the left smaller than the right, and there was no reaction to light or to accommodation a case of total amauros s The ophthalmologist reported bilateral postneuritic atrophy

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* Read before the New York Academy of Medicine Section on Neurology and Psychiatry April 11 1916

Hearing was normal There was no hydrorrhea, but there was total bilateral anosmia The patient could not distinguish by taste between sugar, salt and vinegar, but she said strychnin was bitter, and spit it out

The muscles of the upper extremities were flabby, with a tendency to hypotonicity The muscles of the lower extremities were well developed with a tendency to hypotonicity The hips, knees and ankles were spastic both during active and passive movements The gait was of the spastic ataxic type, the patient reeling as if drunk, but not always in the same direction She walks with a broad base, very unsteady, and is not certain when the foot has reached the floor That this uncertainty is not due altogether to her blindness is proved by the fact that she has the same difficulty in moving her legs when lying in bed, in spite of the fact that her postural sense is good

Romberg's sign is markedly prominent The plantar and knee reflexes are exaggerated and the gluteal reflexes are present

Kernig (resistance to extension of leg or flexed thigh) and Bechterew's signs, Babinski, Oppenheim and Gordon's reflexes are absent Abdominal reflexes present The ankle reflexes were present and exaggerated There was no ankle clonus and no sensory disturbances could be elicited The mental condition of the patient should be borne in mind There was no motor aphasia, no astereognosis (failure of tactile perception), no adiadokocinesis (failure to alternately extend and flex joints quickly and repeatedly, particularly supination and pronation)

Cerebration was slow, cohesion of ideas poor, and there was emotional instability The patient answered questions slowly, became irritated when asked to repeat an answer, and cried and laughed without sufficient cause When reproached by the examiner for her lack of cooperation, she answered "I am doing the best I can" She was poorly oriented as to time, place and person Her memory was so poor that she did not remember her present address, her husband's or her child's name When asked to mention her birth place, she answered "I can't keep so many things in my mind" When asked to give the names and addresses of two nearest friends or relatives, she answered "When you are sick you have no friends"

The sleep of the patient was restless, with moaning She was drowsy by day and dizzy

A Wassermann test was negative The cerebrospinal fluid was under considerable pressure, but negative both as to the Wassermann reaction and cytologically

The patient was admitted June 23, 1915, at 3 p m, and lumbar puncture was performed on the same day at 5 p m During the remainder of that day she appeared to be in a dazed condition, but took nourishment fairly well On June 25 she got up, after having spent a very restless night, complaining bitterly of severe frontal headache and at 10 a m she asked to be put to bed, as she felt very weak She ate her dinner, and died suddenly at 2 20 p m, without having had any general or localized convulsion at any time

From the examination and history it was evident that we had to deal with some intracranial condition, probably a rapidly growing neoplasm, most probably nonsyphilitic in nature, quite extensive in size and bilateral in character The exact location of this neoplasm, owing to the fact that intracranial growths give a variety of distant (remote) symptoms that sometimes overshadow the direct symptoms, was not a very easy matter to determine

To exclude the middle cranial fossa was comparatively easy It was not so easy, however, to exclude the posterior one Growths in this fossa usually give severe pains in the nape of the neck, yet pains in the front of the head are just as common The position of the pain, therefore, could not be used as a localizing symptom The symptoms of cerebellar tumors are so allied to those of frontal tumors that errors are not always avoidable

Oppenheim found repeatedly unilateral or bilateral anosmia in cerebellar tumors, a condition due to flattening of the olfactory nerves by pressure exerted on them by the base of the brain

One must bear in mind the relative value of early and of late symptoms of brain tumors The vast majority of late symptoms have little focalizing value The distortion of the brain and the marked internal hydrocephalus, occurring in the later stages of tumor, produce a variety of symptoms due only to the distortion and internal hydrocephalus, and not due to the position of the tumor Late symptoms, however, occurring according to anatomic contiguity, may have considerable value Stewart and Holmes long ago called attention to the fallibility of diagnosis depending on late symptoms in tumor of the brain Anosmia, squint, particularly of the external rectus muscle, tinnitus, convulsions, general or jacksonian, are late symptoms of importance in tumors of the cerebellum, but have no definite focal significance

The symptoms of corpus callosum tumors are bilaterality, apraxia or dyspraxia The symptomatology depends on whether the anterior, middle or posterior portion is involved Involvement of the anterior portion gives rise to leg, the middle to arm, and posterior portion to face symptoms Corpus callosum tumors are also characterized by their long duration without choking of the disk, by the frequency of growth in the longitudinal sulcus, and by their extension to and even through the vault of the cranium These tumors also give rise to jacksonian fits, which are usually bilateral, a peculiar mental state, with apathy, and the lack of harmonious interaction of both halves of the body

Liepman has shown that a lesion situated in the right frontal lobe may cut across the path of fibers passing from the left frontal lobe, via the corpus callosum to the right arm center in the right hemisphere, without injuring the projecting fibers from that arm center to the left hand, so that we would have a left dyspraxia from a right frontal lobe lesion

When tumors grow from the meninges or bone (extramedullary tumors) toward the brain and do not involve the brain itself, the Babinski phenomenon may be absent, and the abdominal reflexes present on the opposite side This is particularly true if no secondary softening of the brain substance has occurred In intramedullary conditions the reverse is true, except in postcentral tumors which do not involve the pyramidal tracts Our case showed the absence of Babinski, preservation of the abdominals, with no sensory involvement, and thus pointed fairly definitely to an extramedullary growth

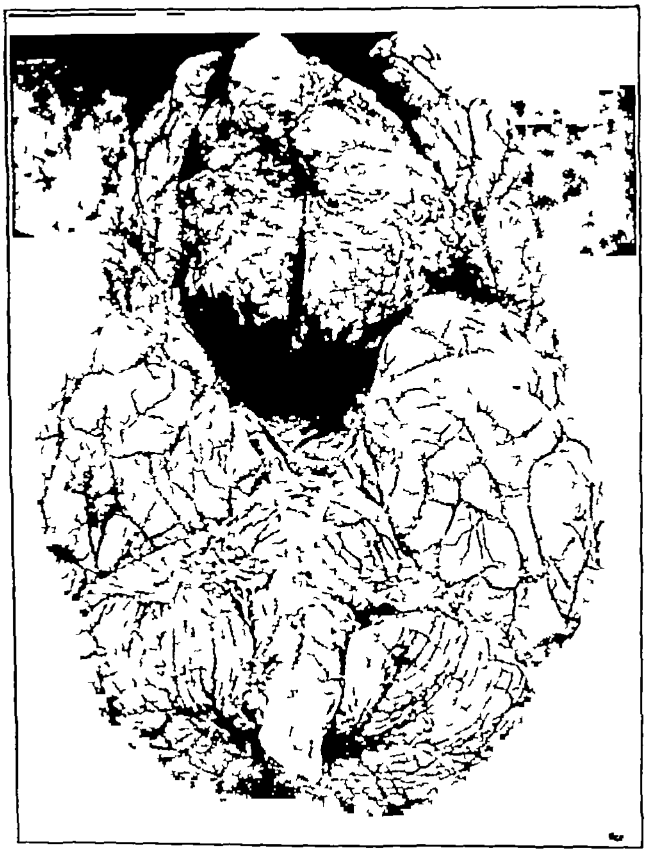
Various attempts have been made to attribute the mental symptoms occurring in brain disease to frontal lobe involvement, but without success It is inconceivable that such matters as the intelligence, emotions, judgment, will or self control should be localized in the frontal part of the brain They are no more localized than the ego itself, nevertheless, it has been established that when the frontal lobes are affected, the mental symptoms are somewhat more in evidence Almost every syndrome of psychic disease has been described by observers as characteristic of frontal lobe disease

When one bears in mind the long duration of these tumors, the large size attained by them, the marked internal hydrocephalus and edema of the brain, so commonly present, and the distortion of the brain, one is not surprised at the appearance of mental symptoms due to the involvement of almost the entire brain But cases are found in the literature in which all the above factors were present, and yet mental symptoms remained in the background

General convulsive movements and focal twitchings have frequently been noted in deep seated frontal tumors Later, when the rolandic area or pyramidal tracts are encroached on, convulsions of jacksonian character occur along with the other convulsions However, it must be borne in mind that jacksonian convulsions occurring late in the course of the disease have often no focal importance

The bilateral ataxic gait could not be explained by frontal involvement, unless one were to suppose that both frontal cortices or subcortices were involved It was best explainable as a variety of apraxia affecting both legs, the location of which is the anterior portion of the corpus callosum

Bearing all these facts in mind, and taking into consideration the fact that in our case exophthalmos was an early symptom, and a postneuritic atrophy has resulted within a period of five months in total blindness, we thought, in the absence of symptoms pointing to cerebellar involvement, that this atrophy was one of the most important localizing symptoms, indicating some increasing direct pressure either on the entire chiasm or on both optic tracts or nerves The important point brought out by Foster Kennedy, that tumors in the frontal region compressing the optic nerve produce a central scotoma on the side of the tumor and a papilledema on the other side, could not be utilized as a diagnostic point, the patient at the time we saw her being totally blind We thought it improbable, if not impossible, that such rapidly onsetting blindness could be a nonfocal symptom, and this, with total bilateral anosmia, and ataxia of the legs, justified a tentative diagnosis of involvement of either both frontal lobes or a neoplasm between them, compressing both the olfactory and optic tracts and nerves The absence of a Babinski and the presence of the abdominals were not at this time easy to explain, but were suggestive of an extramedullary growth



Base of brain showing displacement of medulla and the tumor pushing the thinned out frontal lobes apart Dark line within the tumor is portion from which section was made for microscopic examination

The pathologist's report of the necropsy, which was confined to the head, is as follows

The brain measured 17 by 12 by 9 cm., and with the exception of the tumor mass and the depression at the point of its attachment, appeared normal The weight was not determined

There was a median depression measuring 7 by 6 5 by 5 cm which involved the inferior surface of both frontal lobes The surface was concave and smooth, the convolutions and sulci being obliterated The circle of Willis was enlarged, but complete, the anterior cerebral and anterior communicating arteries in normal position, the former elongated, due to displacement backward of the posterior cerebral, with consequent lengthening of the posterior communicating artery The optic chiasm was displaced backward, being 10 5 cm from the anterior margin of the frontal lobe, the normal distance being from 7½ to 8 cm Lying within this depression was a globular mass 7 by 6 5 by 5 cm, the surface of which was irregularly roughened, showing numerous slight elevations, some of which were circular in outline and others irregular, and which measured from 2 mm to 1 cm in diameter The tumor was attached to the dura mater in the center of the olivary process of the sphenoid for a distance of one fourth of an inch and connected with the brain by a few vascular strands

Microscopically, the tumor cell was elongated and spindle shaped, containing much protoplasm and an egg-shaped or rod-like vesicular nucleus filled with minute chromatin granulations The cells were arranged in irregular, twisting strands or in concentric whorls typical of the endotheliomas of the brain membranes The tumor had a slender, cellular connective tissue framework, which contained an abundant supply of thin-walled blood vessels

The diagnosis was endothelioma

It was unfortunate that the patient's early death deprived us of sufficient opportunity to study the case further, and that no Roentgen-ray examination could be made

After studying the postmortem brain many of the symptoms obscure at first became clear Evidently the peculiar gait and the leg apraxia were due to involvement of the corpus callosum The conclusion that because of the absence of the Babinski sign and the preservation of the abdominal reflex the growth was extramedullary was correct

The specimen further showed that the duration of the disease was much longer than that given by the patient in her history, because it is a well-known fact that frontal tumors may exist a very long time, and that in this situation they may attain a considerable size without giving the slightest focal symptoms

264 Seventh Street

Time for Rest—There should be hours for necessities, not for delights, times to repair our nature with comforting repose and not for us to waste these times—Shakespeare

TRENCH FOOT TETANUS

GEORGE G DAVIS, M D
AND
JOSEPH J HILTON, M D
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ETAPLES, FRANCE

It is the purpose of this paper to report a case of tetanus, occurring as a complication of "trench foot," and to emphasize the importance of an early prophylactic dose of antitetanic serum in this type of case

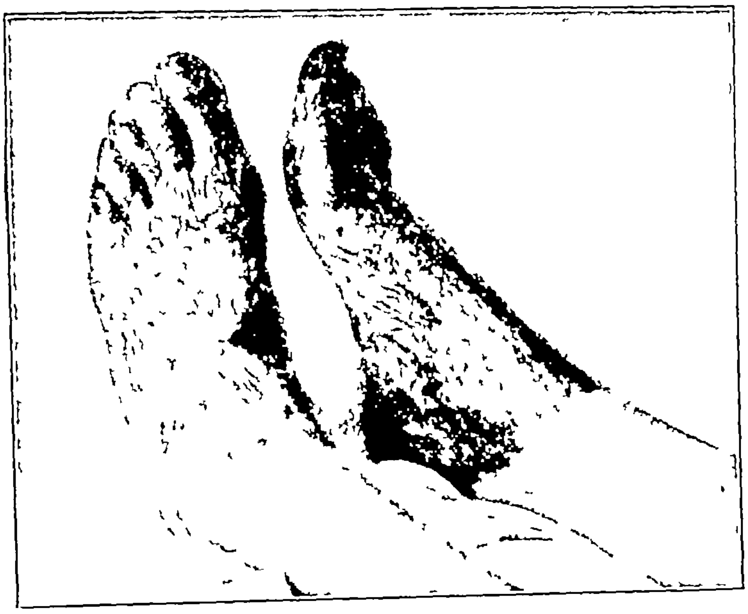


Fig 1 —Superficial abrasions on instep and dorsum of feet and blackening of toes (gangrene) in case of trench foot in which tetanus developed The discoloration of the feet up to the malleoli is due to the application of picric acid Patient died

In using the term "trench foot" we refer to the lesion of the feet which has occurred so frequently in soldiers in the trenches during the cold and rainy weather In the milder cases the feet present no obvious changes, but anesthesia of the functional type is present, or the feet are edematous and definite organic sensory changes can be detected In more severe cases marked cyanosis, gross edema, bleb formation and serious organic sensory changes are present In the worst cases, dry gangrene of the frost-bite type develops, leading to the death of considerable areas of skin, the loss of one or more toes, or massive gangrene of the feet, even extending to the lower third of the leg

The facts of interest in our case are as follows

REPORT OF CASE

Rifleman E C, No 34,946, Company D of the Twelfth Rifle Brigade, aged 20, entered this hospital with the diagnosis of "trench foot," Feb 18, 1916 About February 2 the patient was with his regiment in the trenches near Ypres for five days, during which time he was exposed to the cold and his feet were wet almost constantly, and during the period of five days he changed his socks only twice Then for four days after this he was cut off by the Germans from the rest of his regiment and did not have his shoes off at all during this time He was not wounded and gave no history of injury He remained four days at the casualty clearing station and then was brought here He had no pain in his feet but complained of being unable to go to sleep

On entrance, February 18, the patient had a temperature of 102 4, pulse 120, and respiration 24 per minute The face was rather flushed, and the pupils were equal and reacted equally to light and accommodation Heart and lungs were negative except for the rather rapid rate and a few râles at the base The patient was rather restless, especially at night Both feet were reddened and edematous, which condition extended well up over both ankles, higher on the left leg, where it extended 6 cm above the internal malleolus and 4 cm above the external malleolus The great toe of the right foot was slightly blackened on the dorsal and inner side, and all the toes were more or less cyanotic Anesthesia was present over all the surfaces of both feet, and extended up on both legs about 2 cm Above the anesthetic area was a hyperemic zone, and above this again was a zone of hyperesthesia Over the dorsum of both feet the edema was most marked, and hemorrhagic blebs were present over both insteps Large but superficial fissures were present over the middle of the plantar surfaces of both feet February 22 it was noted that the third, fourth and fifth toes of the right foot, and the great toe of the left foot, became extremely cyanotic, and that insomnia and restlessness continued

February 25, the patient noticed stiffening of the jaw muscles, and 2 000 units of antitetanic serum were given February 26 the jaws were tightly set, and there were slight twitchings of the muscles of the lower extremities The patient caught his tongue between his teeth and slightly injured it There were occasional clonic spasms of the muscles of the back of the neck All toes were now noted to be gangrenous and 10,000 units of antitetanic serum were given intravenously February 27, the respiratory muscles became involved, and opisthotonos became more pronounced, and the spasms more frequent and had to be controlled by chloral and chloroform The patient died, February 28

Immediately after death cultures were made from the tissue from three places in each foot, the gangrenous great toe, the instep where the blebs were, and from fissures on the sole of the foot All six cultures gave the tetanus organism

COMMENT

This patient had not had a prophylactic dose of antitetanic serum It has not been the practice to give it in trench feet cases In all cases in which the patient has been wounded, it is the custom to give a prophylactic dose of 500 units at the front The value of this procedure can be estimated by observation of patients who have passed through this hospital

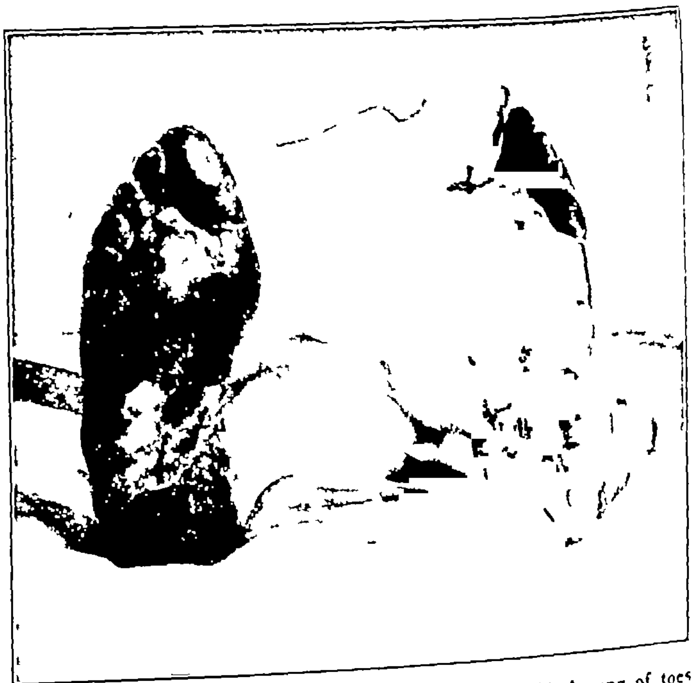


Fig 2 —Superficial abrasions on soles of feet and blackening of toes (gangrene) in case of trench foot in which tetanus developed

Out of a large number (statistics are not popular at the present writing) of sick and wounded which have passed through this hospital in the last nine months, there have been only eight cases of tetanus, and only in two cases did tetanus develop when the prophylactic dose had been given

In considering the fatal outcome of this case of trench foot tetanus, in which a prophylactic dose of antitetanic serum had not been given, and in view of the excellent results obtained by prophylactic doses in the wounded, the conclusion is that it would be a reasonable rule in military surgery to consider all cases of trench feet as in a class with the wounded, and give these patients also a prophylactic dose of antitetanic serum

EARLY DEATH FROM CEREBRAL SYPHILIS, WITH SUCCESSFUL RABBIT INOCULATION

REPORT OF A CASE *

MATHEW A REASONER M D
Captain Medical Corps U S Army
WASHINGTON D C

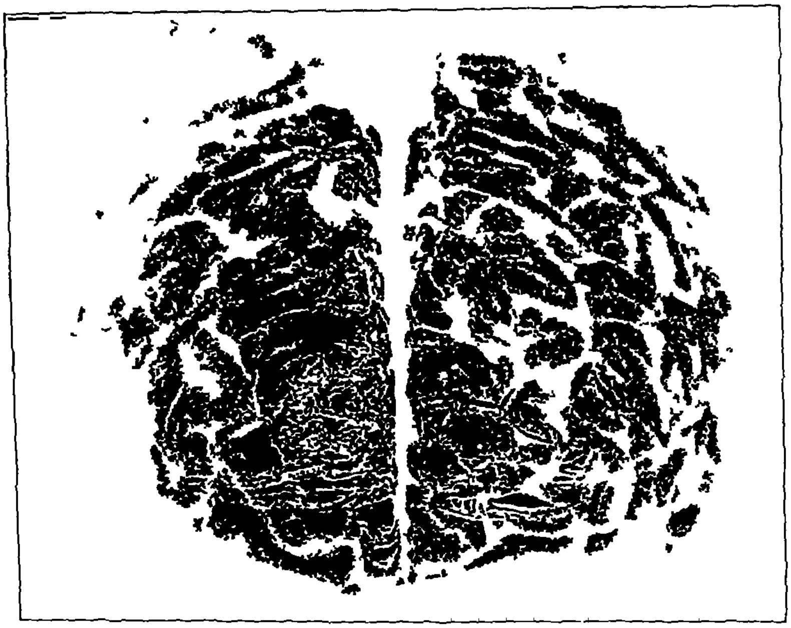
History—Mr X., aged 30, after intercourse Jan 1, 1915 had a large indurated lesion on the penis about Feb 13, 1915 On the request of his physician, Dr Victor H Esch of this city I made a dark-field examination Feb 27, 1915 The examination was negative, probably due to the prior use of calomel powder The Wassermann reaction showed complete fixation

Between February 27 and June 1, 1915, the patient received two intravenous injections of 0.9 gm neosalvarsan and twenty-four intramuscular injections of salicylate of mercury Wassermann tests made on June 2 7 and 8 were all negative. The patient now believed himself cured and stopped treatment despite the advice of his physician to the contrary

During August, 1915, he developed severe headaches, which were more acute at night. He had several attacks of vomiting He also had two convulsions, during which he lost consciousness He described the headaches as being so severe that he felt impelled to strike his head against the wall to relieve the pain.

About September 1 he returned to his physician, who at once began the use of inunctions of mercury I saw the patient in consultation on September 7, at which time a lumbar puncture was performed Examination of the spinal fluid gave the following results globulin + + Lange colloidal gold test, 2-3 3-2-1-0-0-0-0-0 cells 184, Wassermann, complete fixation in 0 5 0 3 and 0 1 c.cm quantities The blood Wassermann reaction also showed complete fixation I believe good judgment was shown in starting the treatment on September 1 with mercury In cases of nervous involvement it seems to me that there is less danger from a Herxheimer reaction following the use of salvarsan if there has been some preliminary mercurial treatment At this time, on the request of Dr Esch, the patient was transferred to my care The following day, September 8, he was given an intravenous injection of 0.3 gm salvarsan, without untoward manifestations resulting His headaches ceased within twenty-four hours, but again he neglected continuous treatment He returned at the end of two weeks with his headaches as severe as before and with a history of having had several convulsions He was at once given another 0 3 gm salvarsan injection intravenously, and the inunctions and injections of mercury were resumed The mercury was given to the limit of toleration, and again his symptoms rapidly subsided He had three or four convulsions during the first two weeks, and after that seemed to be doing quite well His mental condition improved, though he still remained somewhat forgetful and apathetic He gained 8 pounds in weight and returned to work The patient objected both to another lumbar puncture and to intraspinal medication, which seemed advisable, but, due to his apparent general improvement, this was not insisted on The patient, however, agreed to have this done later if necessary At no time were there localizing manifestations or disturbances of vision or hearing At the end of six weeks, the Wassermann reaction still showed complete fixation

On the night of Nov 18 1915, he developed a series of epileptiform convulsions He did not regain consciousness and died at the end of about six hours



Photograph of brain showing lesion

Postmortem Examination—The postmortem was performed by Dr William H Hough after embalming The brain was moderately congested, but there was no flattening of convolutions There was slight opacity of the arachnoid membrane over the anterior half of brain, more noticeable over the rolandic area The base showed no abnormalities The only gross lesion manifest was located, as will be noted in the illustration, in the anterior portion of the convex surface of the right frontal lobe and was about 3 5 cm in diameter Firm adhesions existed between the lesion and the overlying dura The ventricles, as well as the choroid plexus, were apparently normal On section, the lesion was seen extending through the cortex to the medullary substance and appeared as a grayish-red discoloration Sections examined were from the lesion, rolandic area, normal frontal, occipital cerebellum and hippocampus Microscopic examination of the lesion showed several small gummas in the pia and extending into the cortex with the presence of many newly formed blood vessels and endothelial proliferation and thickening of the walls of the older vessels, some of these vessels being apparently thrombosed The pia-arachnoid showed in places marked round cell production and new blood vessel formation, and many of the blood vessels of the cortical portion showed circumscribed round cell infiltration. One spirochete was found in Levaditi section Microscopic examination of other parts of the brain was negative except for slight evidences of meningeal inflammation (endothelial proliferation thickening of blood vessel walls and some round cell production) noticed over the rolandic area

Here then, is the interesting condition of a man whose death was due to cerebral syphilis, ten and one-half months from the date of infection He was treated adequately during the first three and one-half months, and received intensive mercurial treatment and two salvarsan injections during the last two months He presented no signs of spinal irritation, special sense involvement, or other localizing manifestations His only gross lesion has been described

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* From the Department of Pathology Army Medical School Washington D C

* Presented before the District Medical Society Washington D C Jan 19 1916

The spinal fluid in this case contained the *Spirochaeta pallida* as was shown by injection into the testicles of a rabbit If there be such a thing as a highly invasive strain or one having a predilection for the nervous system, any characteristics peculiar to such a strain should be manifest in this one Two other cases, in which infection was contracted from the same source, are now being followed The results of the study of this strain in the rabbit will be published later in conjunction with the findings from a number of other strains, obtained from various sources It is interesting to note that this strain shows the same tendency toward eye involvement in the rabbit, noted by Nichols[1] in the Nichols and Hough strain, obtained from the spinal fluid of a neurorecidiv

AN UNUSUAL STOMACH CASE

WITH ROENTGENOGRAPHIC FINDINGS

GEORGE E BROWN, MD
MILES CITY, MONT

History—G R, woman, aged 29, came to my office with a history of chronic stomach trouble dating back fifteen years Family history was negative Personal history contained nothing of importance except the excessive use of beer and cigarets There was no history or evidence of syphilis The patient had noticed the present stomach trouble for fifteen years, consisting of attacks of epigastric pain and vomiting The pain was of the burning type without relation to meals nor was relief obtained by food Excessive belching and regurgitation of food were also present at times The vomiting took place directly after meals and twice was pure blood One year ago, fainting followed the vomiting of a large amount of fresh blood The patient was examined by prominent surgeons in the Middle West eleven years ago, and the condition diagnosed as gastric ulcer Six months ago, the patient had an acute attack of appendicitis, and the appendix was removed by another physician This was actively inflamed, according to her statement, but its removal had no influence on the gastric symptoms

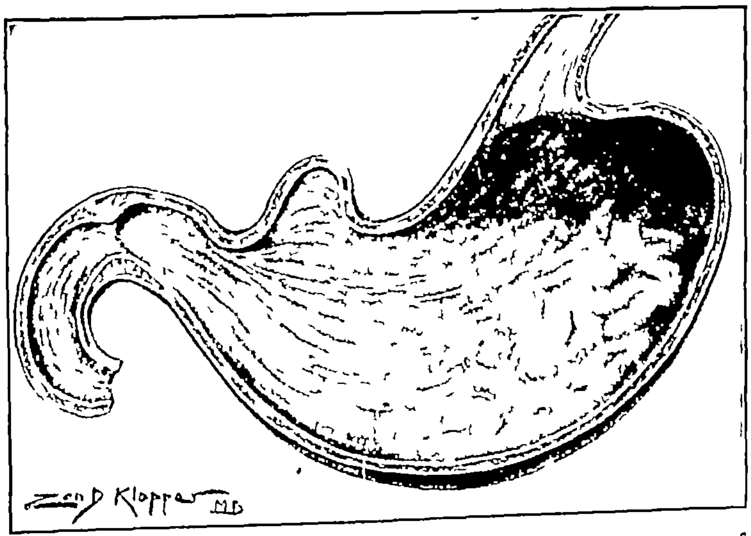

Fig 1—Artist's drawing, showing pouch involving all coats of stomach, no spasm was present when stomach was explored

Examination—Physical findings were negative There was no abdominal tenderness Gastric findings Lavage was bloody after a test meal, the meal also contained red blood Total acid was 40, and free hydrochloric acid 20 At a second examination, total acidity was 67, free, 45 There was an excess of mucus, and microscopic examination showed a few yeast cells, many diplococci and staphylococci The stools gave a positive benzidin test for occult blood The urine was negative

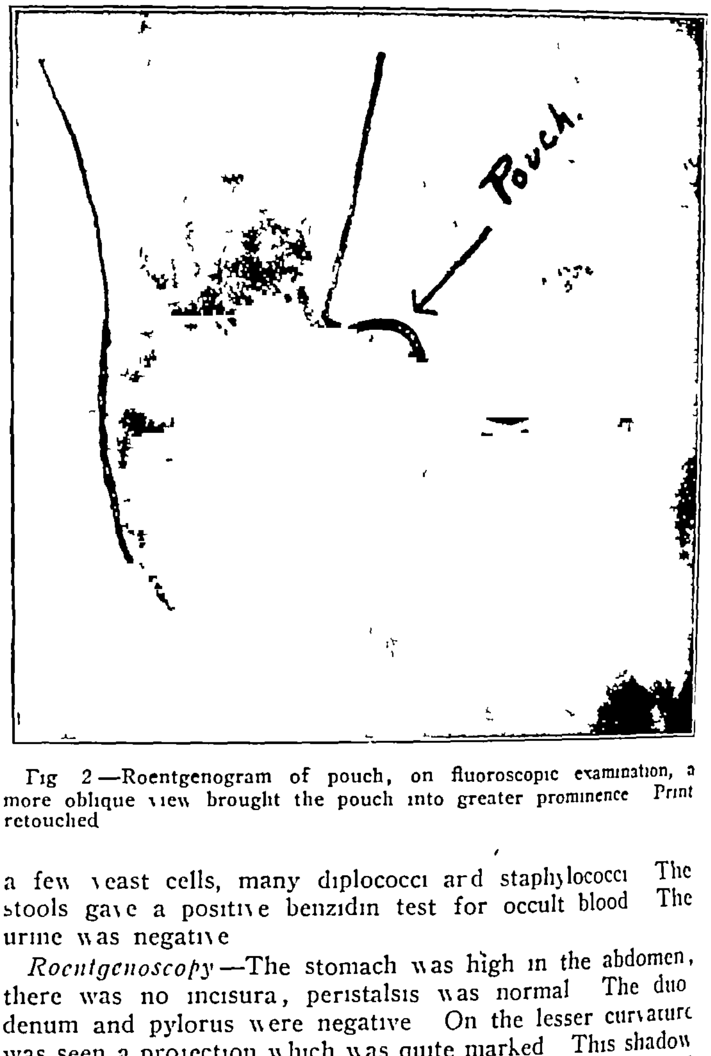

Fig 2—Roentgenogram of pouch, on fluoroscopic examination, a more oblique view brought the pouch into greater prominence Print retouched

Roentgenoscopy—The stomach was high in the abdomen, there was no incisura, peristalsis was normal The duodenum and pylorus were negative On the lesser curvature was seen a projection which was quite marked This shadow was permanent, and peristalsis on the lesser curvature seemed to commence on the pyloric side of the mass which did not partake of any peristaltic wave, while on the greater curvature waves started at the usual site There was no marked tenderness over this area There was no 6 hour residue The stomach was freely movable The patient was reexamined two weeks later with similar findings regarding the mass on the lesser curvature A series of six plates showed this very distinctly and constantly

Operation—The diagnosis was in doubt We decided that gastric ulcer was the most logical diagnosis, and as her condition was unsatisfactory on medical treatment, an exploratory operation was done by my associate, Dr W H Buskirk I will report his operative notes verbatim "Median epigastric incision, stomach delivered into wound No external signs of ulcer On lesser curvature a small outpouching of stomach wall was found, corresponding to deformity shown in x-ray plates This was about the size of an English walnut, and resembled a hernialike weakening of the stomach wall No evidence of ulcer near this pouch A transgastric incision 1½ inches long made into stomach, and interior carefully explored No ulcer nor growth found Mucous membrane bleeds with most gentle handling Pylorus admit index finger Duodenum negative Stomach incision closed The hernia on lesser curvature plicated with three linen sutures"

Postoperative Course—The patient made a rapid and uneventful recovery and left the hospital in ten days, feeling fine She was seen at varying intervals in the following year, and was much improved, but an indiscretion in diet or an excess of alcohol would bring on many of her original symptoms as it was impossible to control her habits and mode of living

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[1] Nichols, H J, and Hough, W H Demonstration of Spirochaeta Pallida in the Cerebrospinal Fluid, THE JOURNAL A M A, Jan 11, 1913, p 108

COMMENT

This case is of interest not alone because of its clinical rarity, but also from the fact that the roentgenologic findings were deceptive The mass on the lesser curvature resembled the roentgenologic picture of penetrating ulcer, though no incisura was present

The clinical findings were also deceptive, namely, hematemesis, occult blood in stools, gastric pain and vomiting

I can find no mention of any similar condition in the textbooks, though I have not made an exhaustive search of the literature

The diverticulum was very pronounced, when the stomach was examined The examining finger of the surgeon could be inserted into this pouch, which was apparently a hernia of the stomach wall

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FECAL CONCRETIONS OF THE APPENDIX

DEMONSTRABLE BY THE ROENTGEN RAY *

JOHN DOUGLAS, M D
Fellow of the American College of Surgeons
AND
LEON THEODORE LEWALD, M D
Instructor in Roentgenology, New York University Director Roentgen Department St Luke s Hospital
NEW YORK

Concretions in the appendix, formed, as they are, of hardened, more or less inspissated fecal matter, are rarely opaque to the Roentgen ray and are therefore usually not demonstrated by roentgenographic examination If bismuth or barium has been previously given for gastro-enterologic examination, a persistent residue in the appendix may sometimes be due to the coating of the concretion with the opaque substance

When, however, owing to the inflammatory reaction of the tissues, calcium salts are deposited on the surface of the fecalith, it may become demonstrable The condition is similar to that which occurs in cholelithiasis Gallstones forming as a result of pure cholesterin precipitation cause no shadow Those in which infection and resulting inflammation of the gallbladder have caused a deposit of calcium salts to coat or become mixed with the cholesterin become opaque

The following two cases are reported to show the possibility of such a fecalith being mistaken in a roentgenogram for a ureteral calculus on the right side, unless the roentgenogram is taken with opaque ureteral catheters in the ureters One case from the literature, however, and one case from a personal communication, show that even this is not an infallible means of differential diagnosis

Case 1—A man C aged 21 a painter, became ill three weeks before admission to the hospital, with pains in the right iliac region vomiting and fever The attack lasted five days Pain gradually disappeared but reappeared two days later in the same spot and persisted up to his admission to the hospital There was no further vomiting or temperature elevation, his appetite was fair and his bowels had been irregular On admission his temperature and pulse were normal The leukocyte count was 15,500 with 78 per cent of polymorphonuclear cells, on the following day the leukocyte count fell to 10,000, with 66 per cent of polymorphonuclears

Physical examination demonstrated slight rigidity and tenderness in the lower part of the right inguinal region, but no mass could be felt On rectal examination a sense of resistance was felt in the right side of the pelvis above the prostate, and a slight mucopurulent discharge from the rectum was present

Roentgenographic examination showed a shadow in the right side of the pelvis (Figs. 1 and 2), and a diagnosis of acute appendicitis with abscess which had probably perforated into the rectum was made The shadow was believed to be a fecalith

On operation it was found that the appendix had sloughed off about 1 cm from its base, and a fecalith about 2 by 1 5 cm in diameter was found in a cavity below the cecum between the rectal wall and the right pelvic wall It appeared as if the fecalith might have been formed by leakage from the appendix stump, which was still patent

Case 2—W T, aged 23, was admitted to St Luke's Hospital with a history of acute appendicitis of three days' duration Temperature on admission was 102.8, pulse, 128

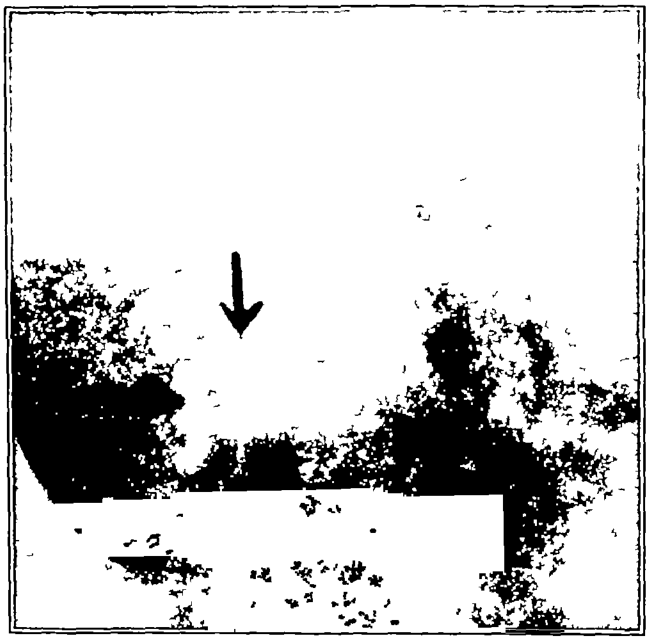

Fig 1—Arrows point to shadow in the region of the appendix diagnosed as fecalith by Roentgen examination diagnosis confirmed at operation For appearance of fecalith after removal see Figure 3

Physical examination revealed an indefinite mass in the right lower quadrant with marked rigidity and tenderness over the whole abdomen No Roentgen examination was made

On operation a gangrenous appendix was found which had perforated but still contained a large, hard fecalith A spreading peritonitis was present

The concretion was so hard that it prompted the idea of testing its density in comparison with the concretion from Case 1 and that of two ureteral calculi which had been demonstrated by roentgenographic examination before removal from other patients The result, illustrated in Figure 3, showed that this also would certainly have appeared on a roentgenographic plate

Pfahler and Stamm[1] state that "only one case has been diagnosed before operation This was discovered accidentally by Weisflog in 1906 who, while searching for a ureteral stone by means of the Roentgen ray,

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* Read before the Surgical Section of the New York Academy of Medicine April 7 1916

[1] Pfahler and Stamm Diagnosis of Enteroliths by Means of the Roentgen Ray Surg Gynec. and Obst 1915 xxi 14

found two stones in the appendix" They report two other cases, one of an enterolith in the cecum, the other of two fecaliths in the appendix

In addition to these reports, isolated cases have been reported within the last few months Hunner[2] of Johns Hopkins reported a case of fecalith of the appendix demonstrated by the Roentgen ray but diagnosed as a probable ureteral calculus, although the possibility of its being in the appendix was stated Stewart[3] reported a case in which a shadow in the right inguinal region was diagnosed as a possible concretion of the appendix, and at the operation it proved to be such, and had apparently escaped from a ruptured gangrenous appendix

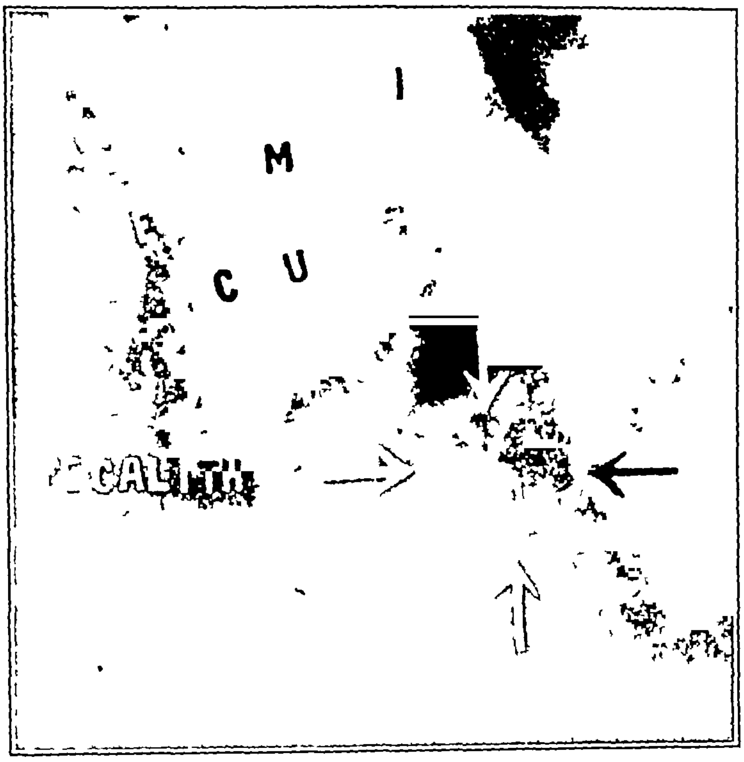

Fig 2—Arrows point to shadow in the region of the appendix diagnosed as fecalith by Roentgen examination, exposure made six hours after opaque meal diagnosis confirmed at operation For appearance of fecalith after removal see Figure 3 I, ileum

Case[4] reported two cases in which a concretion in the appendix had been correctly diagnosed by Roentgen examination and afterward confirmed at operation

Seelig[5] reported a case in which the history, physical signs, ureteral catheterization and Roentgen examination all indicated ureteral calculus, but on operation none was found The obstruction in the ureter was caused by a subacutely inflamed appendix being adherent in front of the ureter, and the shadow in the roentgenogram was due to a fecal concretion in the appendix

Eastmond[6] reported a case almost identical with that of Seelig

The patient, man, aged 38, had several attacks of pain high up on the right side Roentgen examination showed a shadow just above the transverse process of the third lumbar vertebra on the right side about the outer margin of the psoas muscle. Exposure made with the opaque catheter in the ureter showed an apparent obstruction at the point of the suspicious shadow and close approximation of the catheter and the shadow, so that the suspicious shadow was believed to represent a stone in the ureter At operation, an anterior incision having been made, the appendix was found with its tip firmly adherent to the ureter and compressing it, causing obstruction The tip of the appendix contained a concretion which accounted for the shadow noticed in the roentgenogram The concretion was oval with its longest diameter vertical, so that this very much simulated a ureteral calculus

On removal of the appendix, a catheter passed up from the bladder showed the ureter free

It would appear, therefore, that in a small number of instances a fecalith of the appendix may be demonstrated by roentgenographic examination, and that this fact must be taken into consideration when making a diagnosis

Usually the passage of opaque ureteral catheters will be of the greatest assistance in differential diagnosis, but the two cases reported by Eastmond and Seelig demonstrate that even with this assistance a mistake may be made

As a further aid in Roentgen diagnosis, we would suggest that when the shadow is above the crests of the iliac bones, a *lateral* stereoscopic roentgenographic examination be made, preferably with an opaque catheter in the ureter on the suspected side In a case recently examined in this way we were able to distinguish what is probably a calcified lymph node from a supposed ureteral calculus

If there is still doubt, a Roentgen examination, combined with an opaque meal or enema, may show the relationship of the suspicious shadow to the appendix or cecum, as in Case 1 (Fig 2)

Finally, we would call attention to the possibility of one encountering a left sided appendix due either to a nonrotation of the colon or to a complete transposition of all the viscera One of us (Le Wald) has encountered the former condition in three persons, and the latter condition in twelve A shadow on the left side, therefore, may represent a calculus in the appendix unless a Roentgen examination shows the cecum on the right side [7]

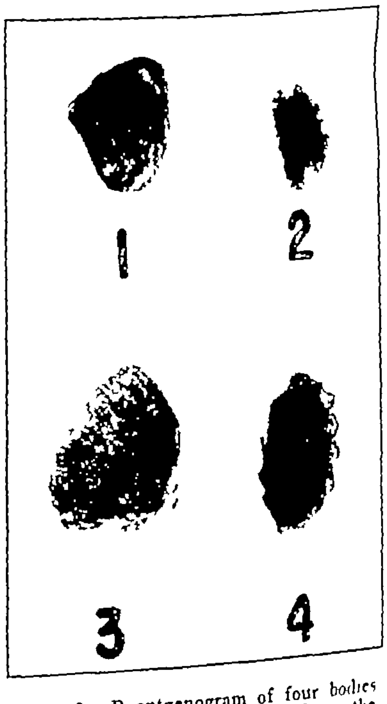

Fig 3—Roentgenogram of four bodies of about equal density, two from the appendix and two from the ureter 1, an appendix concretion in a case of acute gangrenous appendicitis 2, ureteral calculus, 3, concretion from the appendix diagnosed by Roentgen examination as a ureteral concretion prior to operation, 4, ureteral calculus Exact size

51 West Fifty-Fourth Street — 99 Claremont Avenue

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[2] Hunner At a meeting of the Genito Urinary Section of the New York Academy of Medicine, Jan 19 1916

[3] Stewart At a meeting of roentgenologists at Atlantic City, Jan 22 1916

[4] Case At a meeting of roentgenologists at Detroit, Feb 5, 1916

[5] Seelig Surg, Gynec and Obst 1908 vii 485

[6] Eastmond, Charles At the meeting of the New York Roentgen Ray Society, Feb 21, 1916

[7] Since the preparation of this article for publication a third case has come under our care D F, a girl 2 years of age was referred to St Luke's Hospital by Dr J F Bell of Englewood, N J with a diagnosis of acute appendicitis A Roentgen examination made for the purpose of excluding the possibility of a right side central pneumonia (two previous cases of this nature having come under our observation) disclosed a shadow in the appendix region and no pneumonia Operation revealed an acutely inflamed, gangrenous appendix containing a concretion corresponding in size to the shadow on the Roentgen plate Roentgen examination of the removed appendix further confirmed the identity of the shadow

New Instruments and Suggestions

A SIMPLIFIED METHOD OF ADMINISTERING SALVARSAN

Frank A. Brayton, M.D., Indianapolis
Senior Assistant in the Department of Skin and Syphilis Bobbs and City Dispensary

For eighteen months I have been administering salvarsan intravenously by the means of a 30 c.c. syringe. The manufacturers of this product have always advised that larger amounts of water be used (250 c.c. for 0.5 gm.). I have no hesitancy in giving 0.6 gm. in 30 c.c. of water. The results obtained have been so consistently successful that I think a description of the method employed not amiss.

In the directions for giving neosalvarsan it is advised that the drug (0.9 gm.) be given in 150 c.c. of water. In connection with my associates in the Bobbs and City Dispensary I have given 3,000 injections of neosalvarsan (0.9 gm.) in 10 c.c. of water, using an ordinary glass syringe. The number of reactions was much less in this series of cases than when the gravity method was used and the solution was made up to 150 c.c. owing to the fact that the so-called "water-faults" were eliminated. I am confident that the same holds true for salvarsan.

The apparatus necessary for preparing the solution and administering the injection is very simple, as shown by the illustration:

1. One 30 c.c. Lüer syringe with needle.
2. One glass-stoppered 60 c.c. shaking bottle.
3. One bottle of 15 per cent. sodium hydroxid with medicine dropper.
4. One 50 c.c. funnel.

TECHNIC

The apparatus is sterilized by boiling in freshly distilled water in an 8 inch aluminum pan. The shaking bottle containing approximately 30 c.c. of boiling water is removed from the pan, and the salvarsan is added. It is then shaken until a clear solution is obtained. Glass beads in the shaking bottle facilitate the preparation of the solution. Fifteen per cent. sodium hydroxid is added until the precipitate which at first forms is dissolved. The solution is then filtered through a pledget of sterile cotton in the funnel directly into the barrel of the syringe. The plunger of the syringe is inserted and the needle attached. The air is expressed from the syringe and the solution is then ready for injection. The procedure is the same as for any intravenous injection in which a syringe is used. Any all-glass syringe is suitable.

TABLE 1.—PRIMARY STAGE: FORTY-SIX PATIENTS

Dose, Gm.	Number of Injections	Reaction*: Slight	Moderate	Severe	None
0.4	154	4	3		149
0.6	36	1	2		31

TABLE 2.—SECONDARY STAGE: FORTY-FOUR PATIENTS

Dose, Gm.	Number of Injections	Reaction*: Slight	Moderate	Severe	None
0.4	190	6	5		179
0.6	36	1	2		33

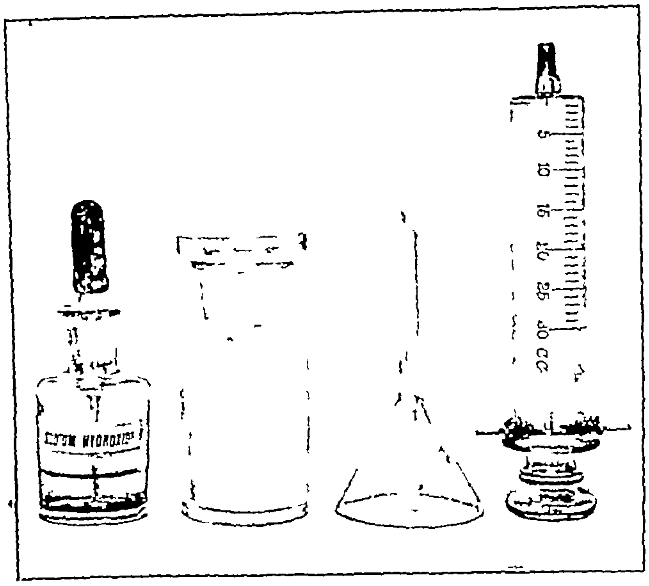
TABLE 3.—TERTIARY STAGE: FORTY PATIENTS

Dose, Gm.	Number of Injections	Reaction*: Slight	Moderate	Severe	None
0.4	178	4	5		169
0.6	10	1			9

* By "slight reaction" is meant flushing of face, nervousness and slight acceleration of pulse lasting only a few minutes. By "moderate reaction" is meant headache, chills, fever and pain lasting not over four hours. By "severe reaction" is meant headache, chills, fever, vomiting, diarrhea, vasomotor disturbances and collapse.

The accompanying tabulations of 604 injections show the reactions obtained.

These tables show that seventeen reactions were observed classed as slight. *In the true sense of the word, they should* not be classed as salvarsan reactions, but as psychic manifestations due to fright, etc. All patients who have complained of a "sense of fulness" in the face, slight dizziness, or "funny sensations" are recorded under this heading.



Apparatus used for administering salvarsan with a 30 c.c. syringe.

In seventeen instances moderate reactions are recorded. None of these lasted over four hours, and the majority not over two hours.

In 570 injections no reactions were observed.

ADVANTAGES

The chief advantages of this method are:

1. Time and labor are saved. The apparatus can be sterilized, the solution prepared and the injection given in seven or eight minutes. This is especially desirable in dispensary practice where the time is limited and several injections must be given. There is no complicated and cumbersome apparatus to be sterilized. The solution may be administered in thirty or forty seconds with the syringe, whereas with the gravity apparatus it often takes from twelve to fifteen minutes for the solution to run through the needle, which must of necessity be of small caliber in some cases.

2. The method is less dangerous than the gravity method. In the latter an untrained and inexperienced operator is not always certain that he has entered a vein, nor does he know when the needle has slipped from or pierced through the vein during the procedure. When using the syringe, if he is at any time in doubt he may readily assure himself that the injection is moving properly by pulling back the piston and noticing the return of blood into the glass tip of the barrel of the syringe. Further, there is no danger of air entering the vein.

3. The number of salvarsan reactions is less than when larger amounts of water are used. The greater the dilution the greater will be the number and severity of reactions due to the so-called "water faults." In 30 c.c., "water faults" are practically eliminated.

4. By using this technic, the giving of salvarsan becomes *a one-man operation.*

ADDENDUM

Since writing this paper I have given to sixty-five patients a series of 342 injections of arsenobenzol, the arsenic compound prepared by the Dermatological Research Laboratories of the Philadelphia Polyclinic under the direction of Dr Jay F Schamberg The 0 4 gm dosage was used in the 30 c c dilution, and the injection given with a syringe in all cases In no one of these patients has there been a reaction of note Seven of these patients following the injection at varying intervals of from one to four hours have complained of headaches which might or might not have been due directly to the administration of the drug Clinical results accomplished by the use of arsenobenzol have been equally as good as the results obtained from the use of salvarsan I am firmly convinced that its toxicity is lower than that of salvarsan, as can readily be seen by comparing the results of these 200 injections with the 600 injections reported above

330 Newton Claypool Building

MODIFICATIONS OF MacKENZIE INK POLYGRAPH

R Edwin Morris, M D, Minneapolis

Teaching Fellow, University of Minnesota Medical School, Minneapolis

Certain modifications of the MacKenzie ink polygraph have been made and have proved of definite value in our work in the University Hospital These are as follows

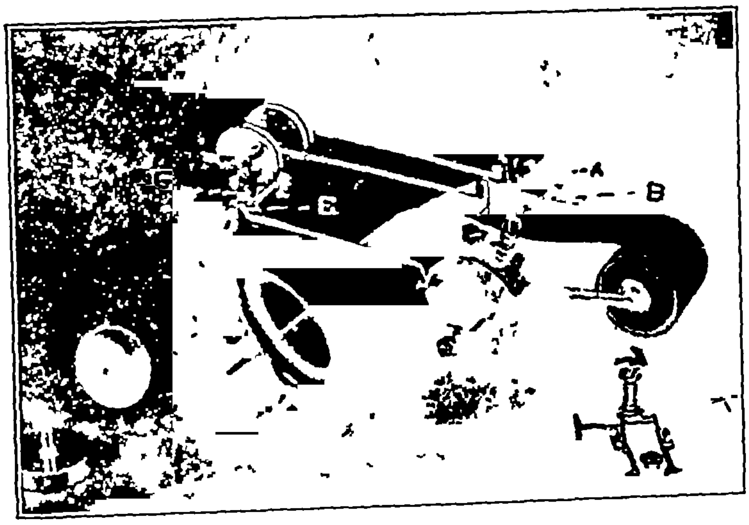


Fig 1 —Original MacKenzie polygraph

1 The spring *A*, which holds the roller *B*, has been replaced by a bridge *C*, which is provided with set screws *D*, these can be adjusted so as to regulate at will the pressure on the axle by the spring, thus adjusting the paper feed This substitution has resulted in a much more perfect control of rate in supplying the paper

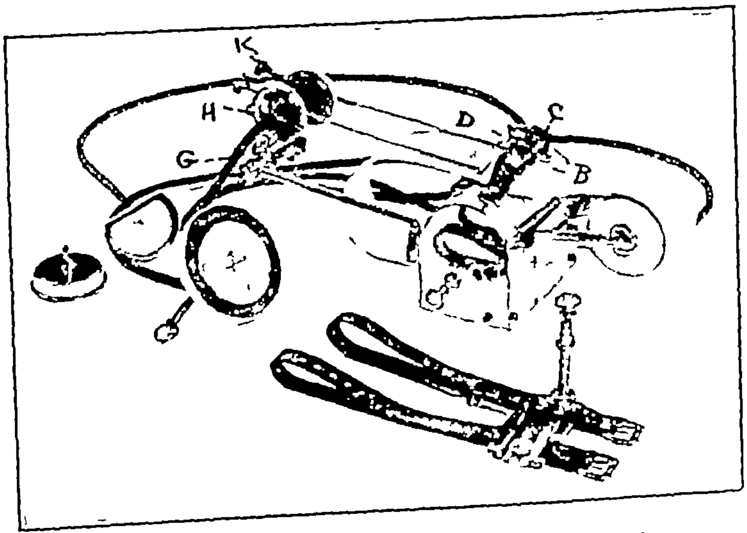


Fig 2 —Modified polygraph, dismounted Showing modifications

2 The distal portion of modification ring *E* (Fig 1), has been removed, with part of the outer surface of the ring thus leaving a shoulder (*F*, Fig 3), which permits tension These changes permit the tambours to be detached much more readily and allow definite ease of adjustment

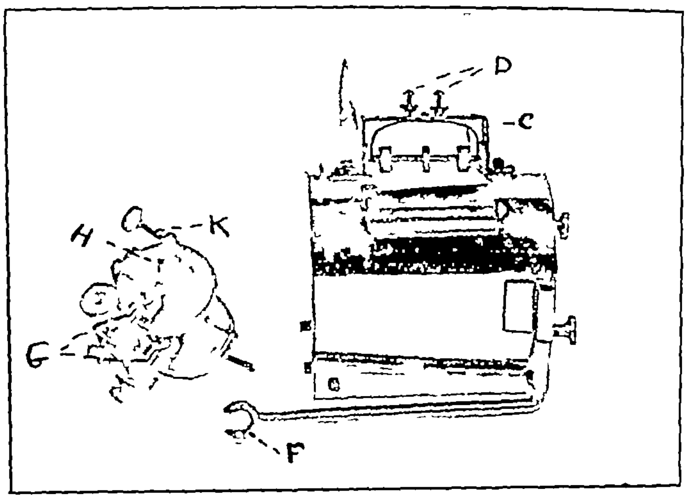


Fig 3 —Modified polygraph assembled

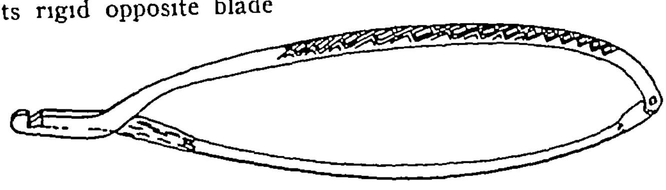
3 To the upright (*G*) of each tambour support a stationary vertical bar (*H*) has been attached, through the upper end of which runs a micrometer screw (*K*) which permits a delicate and accurate control of the pens This modification corresponds to the fine adjustment of a microscope and permits rapid, accurate and independent adjustment of the pens at will

NEEDLE HOLDER

W P Megrail, M D, Wheeling, W Va

This needle holder consists of two blades and a screw or rivet which connects the blades and forms a hinge at the proximal end of the instrument The rigid blade has a suitably curved handle and a hook shaped jaw at the distal end, and near the jaw is a slot through which passes freely the opposite spring blade, which has a jaw on its distal end

Very slight pressure on the handles tends to straighten the spring blade, and forces its jaw against the hooked jaw of its rigid opposite blade



Needle holder

A slight projection near the distal end of the spring blade prevents the jaws from opening too wide

The advantages of this instrument are

It is simple, having only three parts

It is not apt to get out of order

It has a powerful grip, which is the application of what is known in mechanics as the "toggle joint"

It will hold any needle, and is not so liable to break them because it grasps them on the edge instead of on the thin flat or curved sides

Consumptive Wins Suit—A citizen of Toronto a short time ago brought action against a well known manufacturing jewelry firm charging that he had contracted tuberculosis while in the employ of the company This, he claimed was the result of negligence on the part of the employers in not providing proper ventilation of the building, dust and fumes being not properly removed The jury deliberated for several hours and brought in a verdict in favor of the plaintiff, awarding him damages to the extent of $3,000 This is believed to be first case of its kind ever tried in Toronto

HISTOLOGIC TECHNIC

L. W Strong, M D, New York
Pathologist, Woman s Hospital

The following modifications of current histologic methods were devised to shorten the time for making routine reports on histologic specimens It is always possible to harden and embed any individual specimen rapidly, but this implies a departure from the regular routine

These modifications are adaptable as regular routine, and reduce the time for reports to three days with an additional saving of labor and reagents, very considerable in itself The resulting hardening fixation, dehydration and clearing of the tissues leave nothing to be desired

1 Ten per cent liquor formaldehydi in 80 per cent alcohol, over night.

2 Ninety-five per cent alcohol until say, 4 p m

3 Acetone, from one half to two hours, at convenience

4 Chloroform-paraffin over night in a warm place.

5 Paraffin, four hours

6 Embed

This embodies the least handling and the most convenient intervals

It will be found of the greatest convenience to have a wooden rack made with cells just large enough to hold the proper stock laboratory bottle, three rows deep and, say twelve long The first row of bottles contains formol-alcohol, the second 95 per cent. alcohol, and the third acetone This wooden rack obviates the necessity of writing numbers on bottles or labels prevents error from misplaced bottles and enables the reagents to be used repeatedly or until weakened Case numbers are printed for a thousand or more in advance on small slips and each new case has its slip placed in the front row of cells where it stays until the specimen leaves the rack

In embedding in paraffin, aluminum muffin tins will be found most serviceable one sheet holding from six to eight cases

All specimens coming to the laboratory during the day are described at a set time, late in the afternoon Sections are taken then and placed in the formol-alcohol The following morning they are advanced into 95 per cent alcohol where they remain until just before the day's specimens are described when they are advanced into acetone After the day s specimens are described, the acetone specimens are placed in chloroform-paraffin on the top of the paraffin oven over night

On the following morning they are placed in 48 degree paraffin for two hours and 52 degree paraffin for two hours, and are then embedded

An Inexpensive Container for Use in Staining Acid-Fast Bacilli—Often in the daily routine it becomes necessary to make a stain for acid-fast bacilli We are familiar with the ordinary method of preparing the slide or cover glass with the addition of the stain and consequent heating To avoid the usual phenomenon that of spilling the stain an ordinary nickel plated metal shaving stick soap container may be employed These containers are in one piece with or without hinged cover (the latter preferred), and have a capacity of over 50 c.c. Several slides may be stained at one time When not in use, the containers are practically air-tight preventing evaporation of the stain—George D Horton Bacteriologist, Missouri State Poultry Experiment Station Mountain Grove Mo

Therapeutics

HEMORRHAGIC CONDITIONS

(*Continued from p 1779*)

TRANSFUSION OF BLOOD

The idea of introducing healthy blood into the circulation of a person threatened with death either from chronic disease or from some acute accident is not a new one Early it became evident that there were certain objections to the introduction of the blood of lower animals into man, and the practice fell into disuse During the last century, experiments were made on the direct transference of the blood from one person to another This was attempted by means of rather complicated apparatus and under certain handicaps which, now, may be avoided The earlier attempts of this sort were made before the days of perfect aseptic technic, and infection sometimes followed the operation of transfusion Recently, because of an increased interest in the possibilities of transfusion, there have been published descriptions and results of several new methods These methods tend to the elimination of those factors that are responsible for untoward symptoms following transfusion As a result, transfusion in the hands of a trained and experienced operator is fraught with little or no danger to either the donor or the recipient of the blood This fact has led investigators to experiment on many different types of disease in which previously it would not have been deemed advisable to transfuse

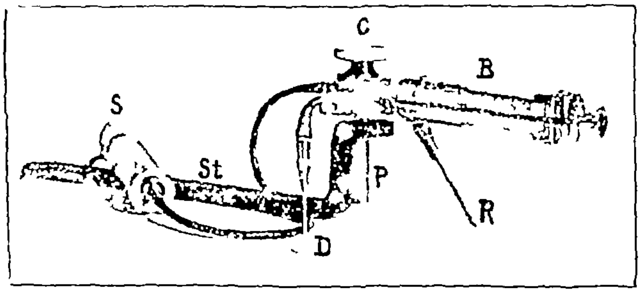


Fig 1—Unger s instrument for syringe transfusion *C* s op-cock, *B* blood syringe connected to blood outlet *S* saline syringe connected to saline outlet *D* donor s cannula connected to donor s ou let *R*, recipient s cannula connected to recipient s outlet *St* stand *P* pedestal by which the stop-cock is raised or rotated

When transfusions were first attempted, and even up to recent years, little thought was given to the physiology of the blood and to the part played by changes produced in the blood during the progress of the transfusion With a knowledge of the processes concerned in coagulation, and also with the perfection of simple and reliable methods for testing the properties of the blood plasma and red blood corpuscles, unfavorable results, due to the infusion of the blood itself, are uncommon Untoward symptoms do not occur in more than 10 per cent of the transfused cases Some of these are trivial and do not last long, others, however, may be of a serious nature Some of the symptoms resemble those seen in serum sickness, with a rise in temperature, chills, and the appearance of an urticarial rash Others are of an anaphylactic character, accompanied by shock However, with properly conducted tests it may be stated that there need be no fatal cases traceable to the transfusion itself

Whatever untoward symptoms or fatal cases occur as a result of the transfusion may be traced to some disturbing element in the introduced blood, to the formation of a thrombus, to the introduction of an embolus, or to the dilation of an already weakened heart by too large an injection of blood or by a too great pressure exerted in the introduction of the blood

The introduced blood may have the property of agglutinating or hemolyzing the blood of the patient Recently, Satterlee and Hooker[1] have suggested three possibilities (1) a disturbed trypsin-antitrypsin balance in the recipient's blood resulting in the formation of a serotoxin, (2) the disturbance of the protective colloids in the body cells of the recipient, exposing them to a reaction of antigen and antibody in the circulation of the recipient, and (3) a toxic disturbance resulting from incipient coagulative changes produced by physical influences arising during the process of the transfusion

Agglutination and hemolysis can be avoided by preliminary tests *Infusion* of syphilitic blood can also be prevented by a complement-fixation test of the blood of the donor The problem of eliminating any other disturbing factors in the blood is still one to be investigated Although several anticoagulants have been suggested for the prevention of coagulation, so far only two have been advocated, herudin (an extract of leech) and sodium citrate, and of these the sodium citrate has been shown *to be the safer and more* reliable It has been found that herudin preparations, particularly those which have been prepared for some time, undergo a certain amount of chemical change with the production of a toxic substance Sodium citrate, on the other hand, has been used very successfully with no, or but very few, untoward effects

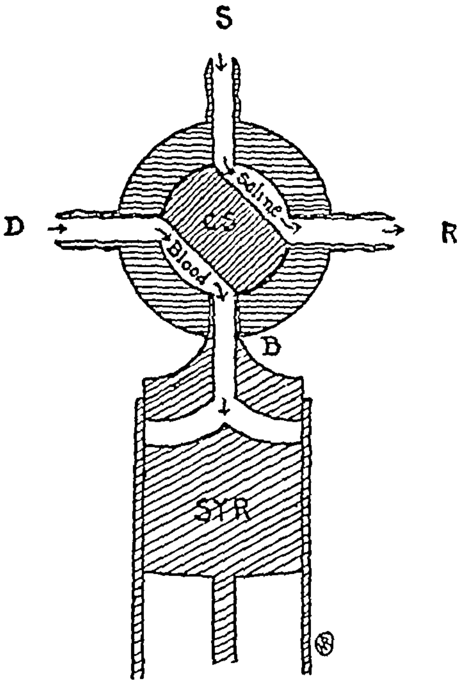


Fig 2 —Unger's instrument Donor's position *D,* donor's outlet, *B,* blood outlet, *Syr, blood syringe* Blood passes from donor's vein through *D,* out at *B* into *Syr S,* saline outlet, *R,* recipient's outlet Saline is forced from saline syringe through *S,* out at *R, into* recipient's vein Channel between *D* and *B,* donor blood circuit, that between *S and R,* recipient saline circuit *CS,* central stopper (rotates through an arc of 45 degrees)

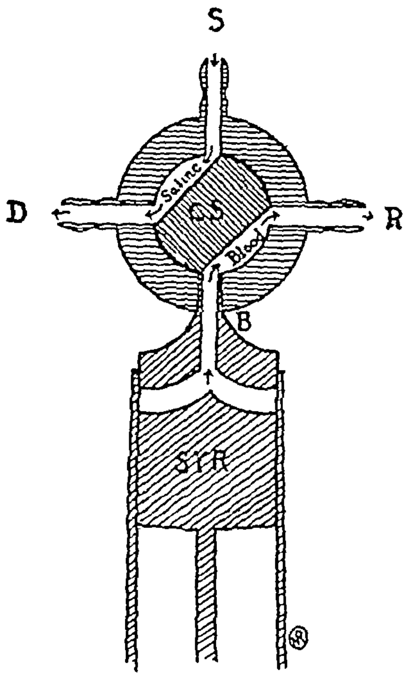


Fig 3 — Unger's instrument Recipient's position *Syr,* blood syringe, *B* blood outlet, *R,* recipient's outlet Blood is forced out of *Syr* through *B,* out at *R,* into recipient's vein *S* saline outlet, *D,* donor's outlet Saline is forced from saline syringe through *S* out at *D* into donor's vein Channel between *B* and *R* recipient blood circuit, that between *S* and *D,* donor saline circuit. *CS,* central stopper

METHODS

Transfusion methods may be divided into two kinds, the direct and the indirect By the direct methods are meant those in which the artery of the donor and the vein of the recipient, or the veins of each, are brought into contact either by being sutured or by being connected with a tube or with a cannula Carrell was perhaps the first to suture the vessels together, and although this method has been successful in some cases, nevertheless it has the disadvantage that it is too time-consuming, and that the amount of blood passing from donor to recipient cannot be measured This can also be said of most direct methods Time is consumed in dissecting out sufficient lengths of the vessels so that they can be easily handled A method of calculating the amount of blood transfused by means of frequent hemoglobin readings has been devised by Libman and Ottenberg[2] For the purpose of preventing clotting of blood during its passage, when the cannula or straight tube is used, these are treated with sterile paraffin or albolene These substances work admirably

The cannula method described by Crile[3] is typical of other cannula methods He uses a cannula through which he draws the proximal end of the divided vein and then turns back the end of the vein like a cuff over the end of the cannula Over this he then draws the proximal end of the divided artery The radial artery of the donor and the median basilic or cephalic of the recipient are used This is rendered comparatively easy by having the patients lie beside each other, but with their feet in opposite directions This operation brings into contact the intima of the artery with the intima of the vein and this greatly minimizes the liability to clotting of the blood

Transfusion by means of a connecting tube is described by Vincent[4] This consists in the use of glass tubes which are used to connect the vein of the recipient with the artery of the donor These tubes are usually from 3 to 8 cm in length In order to avoid clotting, the tubes are coated with various preparations, such as liquid petroleum, petrolatum, stearin or paraffin It was found that petrolatum made too soft a covering, and stearin too hard and rough a covering A mixture of petrolatum, paraffin and stearin in 2 2 1 proportions gives the smoothest and a sufficiently hard covering The blood was found to run well in plain glass tubes, they might be used with a fair chance of success if it were not practicable to use the coated tubes

Probably the first indirect method was the use of *defibrinated* blood, the fibrin having been removed after whipping up the blood This *method,* on account *of the possibility* of infection and red blood and platelet destruction, was given up *In 1913, Lindeman*[5] *announced a simple method* of transfusion which did not necessitate cutting down on and dissecting out the vessels of the donor and recipient Other advantages of the method were that it could be carried out rapidly, and that the amount of blood used could be accurately measured Lindeman's method consists of the use of several record syringes, each with a capacity of 20 c c

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[1] Satterlee, H S, and Hooker, R S Transfusion of *Blood* with Special Reference to the Use of Anticoagulants, The Journal A M A, Feb 26, 1916, p 618

[2] Libman, E, and Ottenberg, R *A Practical Method for Determining the Amount of Blood Passing Over During Direct Transfusion* The Journal A M A, March 7, 1914, p 764

[3] Crile Ann Surg, 1907, xlvi, 329

[4] Vincent, Beth Blood Transfusion in Infants by Means of Glass Tubes, Am Jour Dis Child, May, 1911, p 376

[5] Lindeman, Edward Simple *Syringe* Transfusion with Special Cannulas, Am Jour Dis Child, July, 1913, p 28

Two operators are required, and special cannulas are used. After the donor and recipient have been placed in recumbent positions, the veins to be used are selected. As a rule the median basilic is the vein of choice. In infants the external jugular is better on account of its large size and easy accessibility. A tourniquet is placed around the arm of the recipient, the skin sterilized and the cannula inserted into the vein. The tourniquet is removed, and to avoid escape of blood, a syringe filled with sterile saline solution is attached to the cannula until ready for use. The arm of the donor is treated in a similar manner, with the tourniquet above the site of puncture. After this has been done, the syringes are rapidly filled with blood from the donor's vein and injected through the cannula into the vein of the recipient. To prevent clotting, after each injection of blood a little sterile saline solution is injected into the cannula in the recipient's vein. Before a syringe is used a second time, it must be cleansed with sterile water. Dexterity and speed are necessary. Other advantages in this method are that both arms of the donor can be used at the same time, and that there is no permanent injury to the blood vessels. The same vein can be used repeatedly for other transfusions. In 155 cases in which a total of 136,800 c.c of blood was transfused, there was not one death referable to the transfusion[6] The adults received from 1,000 to 1,800 c c at each transfusion.

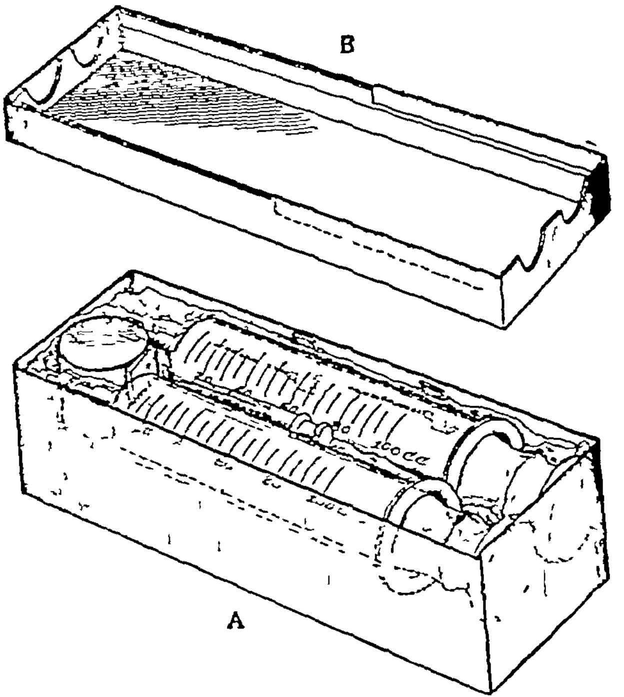

Fig 4—Abelmann's syringe apparatus *A* transfusion case packed which can be carried in the coat pocket *B* cover for case which when extended serves as syringe tray (Fig 5 *A*)

The Lindeman method, however, was open to several objections. These were the constant connecting and disconnecting of the syringe, namely, inability to gage the force with which the blood was injected each time and the risk of clotting inasmuch as the blood was exposed to the air when the syringes were disconnected. It also required the services of two operators both expert in the handling of the syringes.

To obviate these objectionable features, Unger[7] devised an apparatus with a central stopcock arrangement, the stopcock of which could be arranged so that the blood drawn out from the vein of the donor with a 20 c c syringe could be injected into the vein of the recipient with the same syringe. Needles or cannulas are inserted into the veins of both donor and recipient as in the Lindeman method, and these are connected with the apparatus. Only one syringe is required for this, and at no time is the blood exposed to the air. Another feature of the apparatus is that the passages traversed by the blood can be kept clean by flushing them occasionally with sterile saline solution by means of another syringe attachment. Very good results without secondary symptoms have been reported with Unger's apparatus.

A somewhat different method of indirect transfusion is the use of blood to which has been added an anticoagulant. It has already been mentioned that the anticoagulants which have proved most successful are herudin and sodium citrate. Herudin, however, under certain conditions develops toxic properties which should exclude it for transfusion purposes. Sodium citrate has proved very favorable, and has some good features to commend it. One of these features is that blood may be drawn from a donor into the citrate solution and carried to another place for use. It may be kept on ice for a week and used. It does away with the usual operating room technic, and may be injected into the vein of a patient at his home.

In describing this method, Weil[8] states that it is simple "Blood is aspirated from a vein and is at once well mixed with sodium citrate in 10 per cent solution in water, in the proportion of 1 c c of solution to 10 c c of blood. Exceptionally one encounters blood which requires slightly more or slightly less citrate proportionally" Lewisohn[9] has used this method, with slightly different proportions of sodium citrate, in twenty-five cases, the amounts of blood transfused varying from 900 to 1,600 c c. In most of these cases there was a diuresis lasting not over twenty-four hours.

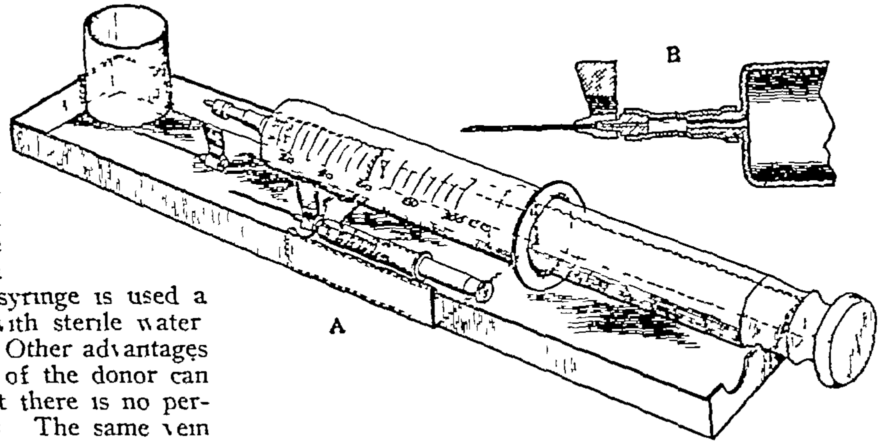

Fig 5—Abelmann's syringe apparatus *A* box cover extended serving as syringe tray and dip pan *B* longitudinal section of syringe

(To be continued)

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[6] Lindeman Edward Reactions Following Blood Transfusion by the Syringe Cannula System The Journal A. M. A. Feb 26 1916 p 624

[7] Unger L. J A New Method of Syringe Transfusion The Journal A. M. A. Feb 13 1915 p 582

[8] Weil, Richard Sodium Citrate in the Transfusion of Blood The Journal A. M. A. Jan. 30 1915 p 425

[9] Lewisohn Med. Rec New York 1915 lxxxvii 141

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SATURDAY, JUNE 17, 1916

THE TREATMENT OF EPIDEMIC MENINGITIS

Epidemic cerebrospinal meningitis is still sufficiently common in this country, as elsewhere, to create an interest in the therapy of this formidable disease. The success of the antimeningococcic serum devised by Flexner has made other modes of combating the infection seem superfluous, for the time at least. In harmony with what has been attempted in the case of other bacterial infections, compounds with antiseptic properties were long ago suggested as of possible value in treatment. Salicylates of mercury were included in the list. Even before the advent of the current serum therapy, however, clinicians questioned the value of the antiseptic substances. Thus Koplik[1] wrote, in 1907:

> The treatment of cerebrospinal meningitis in the past proves to the mind of the writer the futility of drugs. The disease is a self-limited one, much like pneumonia, its duration practically uninfluenced by any mode of treatment, the patients recovering with or without complications independently of the effects of any known drug.

Flexner and Amoss,[2] of the Rockefeller Institute for Medical Research, have called attention to a recent revival of the old plan to use antiseptic drugs directly in the treatment of epidemic meningitis. They point out two circumstances which from a purely theoretical standpoint might be expected to favor the chemical treatment. The infection tends to be local, within the cerebrospinal membranes, rather than general throughout the body; and the membranes involved are directly accessible from without so that the chemical substance can be brought into immediate relation with the seat of infection. To this may be added the fact that judging from its behavior outside of the body the meningococcus is not a highly resistant micro-organism; it is readily injured by chemical action and damaged by the products of its own growth. In the second place, there are immunologic differences between the different types or varieties of meningococcus known to occur as etiologic agents in the production of the disease. Inasmuch as such micro-organisms are subject to therapeutic influence through antiserums only when correspondence exists between the infecting type of micro-organism and the particular specific antibodies present in a serum, it would not seem unlikely that bactericidal chemicals might be less specific and therefore more certain in their curative effects, irrespective of the variety of micro-organism to be combated.

In harmony with the foregoing views, Wolff[3] has recommended the employment of protargol, a compound of protein and silver containing 8.3 per cent. of silver in organic combination and said to be useful as a nonirritant substitute for silver nitrate. Before the working out of the serum therapy, compound solution of cresol had been employed in the direct chemical treatment of epidemic meningitis as early as 1902. The demonstration of the susceptibility of two types of laboratory animals, monkeys and young guinea-pigs, to meningococcic infection has made it possible to institute more exact studies of curative measures than limited statistics on man can furnish in such a highly variable disease. When cultures of meningococci are injected into the peritoneal cavity in the guinea-pigs and into the subarachnoid space in the monkeys, the micro-organisms set up local inflammations, in the exudate attending which, the fate of the meningococci can be followed precisely as in the human cases of epidemic meningitis in which the cerebrospinal fluid is removed from time to time by lumbar puncture.

The results of tests conducted by Flexner and Amoss[2] with protargol and compound solution of cresol are consistent in showing that the chemicals are not curative but rather injurious in the experimental meningococcic infection of animals. The symptoms of the treated animals were intensified rather than ameliorated. In explanation of this result, the reverse of what might theoretically be expected, it must be understood that the key to recovery from meningococcic infection is furnished by the phenomenon of phagocytosis. Whatever promotes phagocytosis, under conditions in which the beneficent leukocytes remain potent, facilitates recovery. Flexner and Amoss have found that the chemicals are antileukotactic and antiphagocytic; they are cell poisons of considerable power. Hence, when the drugs are brought into relation with the seat of infection, they prevent the immigration of leukocytes on an adequate scale, and they reduce phagocytosis by such leukocytes as have entered the serous cavities. Moreover, they also injure and bring about degeneration of the leukocytes themselves.

The New York investigators explain that the resultant of this set of injurious activities is to open the way for a free invasion of the blood by the meningococci and for almost unrestrained multiplication in the serous cavities. Undoubtedly the chemicals do exert a direct bactericidal action on such meningococci as come under their influence under conditions of suitable concentration but not all the meningococci are thus destroyed Those which survive multiply almost without hindrance, while the absence of detoxicating power on the part of the chemical permits the disintegration products of the destroyed bacteria to exert their poisonous effects on the animal organism This is in marked contrast with the effect of the antimeningococcic serum which attracts leukocytes into the infected serous cavities, facilitates phagocytosis by supplying opsonin and promoting agglutination of the diplococci and further exerts a direct antitoxic action on the toxins liberated by the disintegrated micro-organisms

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[1] Koplik, H.: Epidemic Cerebrospinal Meningitis, Osler's Modern Medicine, 1907, [illegible], 517.

[2] Flexner, Simon, and Amoss, H. L.: Chemical Versus Serum Treatment of Epidemic Meningitis, Jour. Exper. Med., 1916, xxiii, 683.

[3] Wolff, G.: Deutsch. med. Wchnschr., 1915, xli, 1486.

If, in the light of these newer experiments of Flexner and Amoss, the theoretical advantages expected to accrue from the action of bactericidal chemicals is more than offset by the harmful effects which they cause, the antiserum still seems to provide the logical therapeutic agent with which to combat epidemic meningitis Innocuous in itself, it promotes those processes essential to recovery from the disease

LOW EARNINGS AND DISEASE

The enthusiasts who emphasize, quite properly, the benefits which arise from the conservation of health often attempt to strike the popular imagination by venturing money estimates of the preventable wastes from disease and death The Report on National Vitality, prepared for the National Conservation Commission by Irving Fisher,[1] finds one and a half billions of dollars as the lowest estimate of the avertable loss from disease and death in this country It is even asserted that the true figures from the statistics available may well amount to several times this figure, but when statistics are based more or less on conjecture, they need to be stated with special caution

Of course, such figures have little significance beyond emphasizing the overwhelming importance of human vitality compared with those interests which are usually measured in money Disease means human misery which cannot be measured, it also means poverty and crime, twin evils, each playing into the hands of the other Although the pauperizing effects of ill health are indicated in such allusions as have been cited, *it is not always recognized with equal force that there is a 'vicious circle set up between poverty and disease, each of which tends to produce the other"* *Poverty is by no means always the outcome of a lack of earning capacity attributable to disease* For this reason it is sometimes advisable to emphasize the fact that although the practice of hygiene need not be a luxury of the rich alone, yet wealth may promote health To what extent the unfortunate poor may be able to remedy their hygienic lot need not be considered here The facts of the interrelation of poverty and disease need to be known first of all An interesting contribution of a statistical sort in this field has just been issued by the United States Public Health Service[2] It considers the health of garment workers in New York City in relation to their economic status Intensive budgetary investigations of wage earners' families in that large metropolis have afforded bases for several determinations and estimates of a *minimum* "adequate" family income in which a fundamental consideration was the minimum annual amount necessary to maintain the wage worker's family of five persons (man, wife, and three dependent children under 14 years of age) under healthful conditions of living These determinations and estimates agree that an annual family income of between $800 and $900 is the minimum amount necessary for this purpose in New York City If the statistics are classed in three groups according to the annual earning of family heads, under $500, from $500 to $700, and $700 and over, it appears that the poorest group has the largest average number of children per family The percentage of mortality of children in the group in which heads of families earned less than $500 a year was 82 per cent greater than, or nearly twice as high as, the percentage of mortality of children in the group in which the family heads earned $700 or more a year These data indicate the same general variations in child mortality among families of different incomes as those shown by some other recent investigations Approximately twice as great a proportion were poorly nourished in the group earning less than $500 a year as in the group earning $700 or more a year The proportion of individuals having hemoglobin percentages under 80 was over twice as high in the group earning less than $500 a year as in the group earning $700 or more a year It is interesting to note that not only was the proportion of anemic individuals greatest in the lowest income group, but also the average hemoglobin percentage was lowest in that group

TUBERCULOSIS AMONG HEADS OF FAMILIES ACCORDING TO INCOME

Annual Earnings of Family Heads	Total Number	Percentage of Family Heads Tuberculous
Under $500	372	5 64
From $500 to $699	566	5 30
$700 and over	456	44

Even more striking are the findings regarding the prevalence of tuberculosis The proportion of tuberculous individuals among the garment workers who were heads of families showed extremely wide variations when the highest and lowest income groups were compared The accompanying tabulation exhibits this comparison

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[1] Fisher Irving Bulletin of the Committee of One Hundred on National Health Being a Report on National Vitality Its Wastes and Conservation Prepared for the National Conservation Commission July [illegible] No 30

[2] *Schereschewsky J W Health of Garment Workers The Relation of Economic Status to Health Pub Health Rep May 26 1916,* xxxi 1298

THE BACTERIA OF MILK FROM NORMAL UDDERS

That the milk of healthy cows, even under ideal dairy conditions, is contaminated as soon as secreted was established in 1899[1] More recently, epidemics of sore throat[2] and appendicitis[3] traced to milk, have drawn particular attention to the presence of streptococci in normal udders, with respect to the nature and frequency of other types of bacteria in milk, almost nothing is known Yet in view of the fact that the number, especially of streptococci, in milk is proposed as an index to its healthfulness, and in view of the wide consumption of milk as the chief sustenance of infants and many invalids, the question of the frequency and the types of bacteria in certified milk calls for definite investigation Such an investigation has been reported by Evans[4] of the U S Department of Agriculture In a study of 192 samples of freshly drawn milk from 161 healthy cows of five different dairies supplying milk to Chicago and to Washington, D C, she has found a definite udder flora comprising bacteria of a parasitic nature — streptococci, micrococci and bacilli Long-chain streptococci, which may be virulent, were isolated from twenty-nine, or 15 1 per cent, of the 192 samples, including milk from all five dairies, and in numbers ranging from very few to 264,000 per cubic centimeter The milk-souring organism, *Streptococcus lacticus,* was not found Micrococci—mostly pyogenic staphylococci, the organisms which, when virulent, cause furuncles, abscesses, suppuration and septicemia — were found in 113, or 58 8 per cent, of the samples, and in numbers up to 80,000 per cubic centimeter Animal inoculations proved some of these to be virulent, the majority were nonvirulent Bacilli — chiefly of a type related to the bacillus of contagious abortion — were isolated from forty-five, or 23 4 per cent, of the whole number of samples, and in numbers as high as 50,000 per cubic centimeter One type, designated *B abortus var lipolyticus* because of its activity in decomposing butter fat, manifests its presence in the unpleasant flavor and odor of ripened cream Two other *B abortus* types resembled comparison cultures isolated from pathogenic sources The investigator points out that when organisms enter into the digestive tract with other food, the body tissues and fluids are protected by the mucous membranes against the ravages of the bacteria, and that therefore it cannot be assumed that bacteria which are pathogenic for inoculated animals would be injurious to human beings when thus taken into the body in milk Nevertheless, the fact that the bacteria which she found commonly present in milk from healthy udders were parasitic and, in some cases, virulent in type, should hasten the growing conviction that milk is certified only when it is pasteurized

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[1] Moore Proc Soc for Promotion of Agr Science, *1899, p* 110 Ward Bull 178, New York (Cornell) Agr Exper Sta, 1900

[2] Capps, J A, and *Miller,* J L The Chicago Epidemic of Streptococcus Sore Throat and Its Relation to the Milk Supply, The Journal A M A, June 15, 1912, p 1848 Rosenow, Edward C, and Moon, V H On Milk *Epidemic of* Sore Throat and the Virulence of Streptococci Isolated from the Milk, Jour Infect Dis, 1915, xvii, *69*

[3] Rosenow, Edward C, and Dunlap, *Stella* I An Epidemic of Appendicitis and *Parotitis* Probably Due to Streptococci in Dairy Products, Jour Infect Dis, 1916, xviii, 383

[4] Evans, Alice C The Bacteria of Milk Freshly Drawn from Normal Udders, Jour *Infect* Dis, 1916, xviii, 437

Medical News

(Physicians will confer a favor by sending for this department items of news of more or less general interest, such as relate to society activities, new hospitals, education, public health, etc.)

DISTRICT OF COLUMBIA

Society News—At the twentieth annual meeting and banquet of the Washington Medical and Surgical Society held at the Hotel Raleigh, loving cups were presented to the secretary, Dr Walter Van Sweringen, and the treasurer, Dr Frank E Gibson, in appreciation of their work on behalf of the organization The address of the evening was made by Dr Edward Martin, Philadelphia, on "Psychologic Surgery"

Personal—Dr Harvey W Wiley, Washington, president of the United States Pharmacopeial Convention, gave a dinner to the trustees of the organization, May 5——Dr George M Kober, Washington, has been elected president of the Washington Sanitary Housing Company, and Mrs George M Sternberg has been elected a member of the board of directors to fill the vacancy caused by the death of her husband, General Sternberg——Dr Carroll E Bingman, Washington, has accepted a position with the First Aid Department of the American Red Cross

ILLINOIS

Physicians Vindicated—At the completion of the testimony for the plaintiff in the damage suit of $25,000 brought by Oscar Oserud against Drs Emanuel M Rundquist and C Olof H Nordwall for alleged malpractice in performing a surgical operation, Judge Frost on May 31 ordered the jury to bring in a verdict for the defendants, stating that the testimony had failed to substantiate the claim, that the physicians had erred in their conduct of the operation

Hospital News—The final campaign to raise a fund of $100,000 for the establishment of a nonsectarian hospital in Highland Park opened June 8, and it is announced that more than $60,000 has already been subscribed——*The Julia* Rackley Perry Memorial Hospital has been incorporated at Princeton, and Messrs H H Priestly, Cairo A Trimble and H U Bailey have been named as the first board of directors In the will of Mrs Perry $52,000 was devised for the building of the hospital, and the work of establishing the institution will be commenced without delay

Chicago

Women's Board at Hospital—Women interested in the Henrotin Memorial Hospital met at the residence of *Mrs* Edwin Ryerson, *June 4, to organize a woman's* board for the institution

Personal—Dr David O'Shea, who was recently seriously injured with a resulting traumatic pleurisy, has recovered and resumed practice——Dr Demetrius Staneff, who recently returned from service in the Balkans, gave a talk on the causes of the European War before the Hamilton Club, Brooklyn, May 31

Addition to Mercy Hospital—The new convent wing and addition to Mercy Hospital, which makes up the third unit of the new system, was opened to the public, June 15 The building corresponds in style to the two units previously built, has a frontage of *160* feet, and cost $275,000 The building will contain accommodations for sixty sisters and a hospital addition providing thirty private rooms and four private wards and a maternity department

Graduate Lectures at the College of Physicians and Surgeons—At the University of Illinois, College of *Medicine,* Chicago, during the graduate summer *quarter* (June 20-September 12), in addition to the scheduled courses, a series of lectures will be given before the faculty and students to which physicians and all others interested are especially invited The series will include *about* twenty lectures on special research topics *in* the preclinical sciences by men from various institutions throughout the country Detailed announcements of these lectures will be published from time to time The opening of the graduate quarter will occur, Ju[illegible] d the [illegible] e of the series will be given on [illegible] a [illegible] *rank Billings on* "The Relation [illegible] mental Sciences to Clinical [illegible] preside and will give an [illegible] Work in Medicine"

INDIANA

Tuberculosis Societies Hold Joint Meeting—At a joint meeting of the Indiana and Marion County societies for the prevention of tuberculosis held in Indianapolis May 24 a committee was appointed to study the bills which are to be presented before the 1917 legislature Drs Roscoe L Sensenich, South Bend, and Henry B Shacklett, New Albany are members of this committee, and Dr Alfred Henry, Indianapolis, is an ex officio member A resolution was adopted on the death of Dr William T S Dodds a pioneer antituberculosis worker of Indianapolis

Personal—Dr William T Gott Crawfordsville secretary of the State Board of Medical Registration and Examination has been reappointed a member of the board for a term expiring April 23 1920——Dr Joseph Rilus Eastman, Indianapolis, has been selected to take full charge of all hospital units of the American Physicians Expedition Committee in Austria Dr Eastman sailed for Europe, June 17 accompanied by a staff of fifteen assistants from Chicago and Milwaukee——Drs James J Stanton and Rodney E. Troutman Logansport, received slight injuries by the overturning of an automobile near Remington June 1——Dr Gustavus B Jackson has been reelected president, Dr Thomas B Eastman vice president, and Dr Herman G Morgan secretary of the Indianapolis Board of Health——Dr Charles W Shull, La Fayette, had a slight cerebral hemorrhage, May 31——Dr George H Brodbeck, Roann, was painfully injured in a collision between automobiles 10 miles north of Wabash

MARYLAND

Personal.—Dr N M Keith assistant to the director of the Brady Urological Clinic at Johns Hopkins Hospital is on duty in France with a section of the Harvard unit——Dr Caleb N Athey has been appointed chief police surgeon, and Drs William S Gilroy James M Craighill Elliott H Hutchins and Thomas P McCormick have been appointed police surgeons of Baltimore——Dr Ferdinand O W Reinhard, Baltimore, has returned after five months' Red Cross service in Serbia

Families to Report Diseases—Heads of families are to be held responsible by the health department for the reporting of contagious and infectious diseases in their homes, that are not reported by physicians This statement was made in the first of a series of health bulletins issued by the health department and written by Dr William T Howard Jr assistant commissioner of health Diseases that the law designates as reportable are smallpox, cholera yellow fever measles whooping cough pseudomembranous croup, scarlet fever diphtheria mumps varioloid typhoid fever tuberculosis chicken pox infantile paralysis epidemic cerebrospinal meningitis and affections of the eye.

MASSACHUSETTS

Personal.—Dr Rufus W Sprague has been appointed medical inspector of the health department, to succeed the late Dr Thomas H O Connor Dr Sprague has been medical examiner of the fire department for thirty-two years——Dr Lewis Fish district health officer for the state department of health at Fitchburg has resigned to devote his entire attention to private practice

Harvard Appointments—Dr George Richards Minot, who was awarded a James Jackson Cabot fellowship last year, will work at the Massachusetts General Hospital under the direction of Dr David L Edsall——Dr Lawson Gentry Lowrey who was also awarded a Cabot scholarship will pursue his research work at Danvers State Hospital, under the direction of Dr Elmer E Southard——The George Cheever Shattuck Memorial fellowship of $250 was given to Thomas F Wheedon Brookline, the Charles Elliott Ware memorial fellowship of $275 was awarded to James H Brown Jamaica Plain the research fellowship in genetics of the cancer commission of the university, was given to Clarence Cook Little——Dr Ernest G Martin has resigned as assistant professor of physiology

Hospital News—Burrage Hospital for Boys and Girls on Bumkin Island in Boston Harbor was opened for the season, June 9 Dr Philip A Shinn Boston, is resident physician and the institution opened with sixty sick children The hospital is H-shaped 175 feet by 153 feet two and three stories in height and fireproof——The Boston Floating Hospital will open this season on June 28 The medical corps will be in charge of Dr Henry I Bowditch and seventy nurses will be provided——The fourth annual conference on the medical and social work of the Psychopathic Hospital, Boston was held under the auspices of the trustees of the Boston State Hospital, June 10 Henry Lefavour, chairman of the board of trustees presided and six papers were presented during the afternoon

State Society Meeting—The one hundred and thirty-fifth annual meeting of the Massachusetts Medical Society was held June 6 and 7 in Boston under the presidency of Dr Charles F Withington, Boston At the meeting of the council, Dr Samuel B Woodward Worcester, was elected president Dr Fred W Taylor, Cambridge, vice president, and Dr Philemon E Truesdale, Fall River, orator On the morning of June 6, clinics were held at the various hospitals of the city and in the afternoon there were symposiums on diabetes, nephritis, fractures and tuberculosis On Tuesday evening the Shattuck lecture was delivered by Dr Theodore C Janeway, Baltimore, on 'The Etiology of Diseases of the Circulatory System" The annual discourse was delivered Wednesday by Dr David L Edsall Boston, and in the afternoon there was a symposium on "Goiter," and in the evening the annual dinner was served

MISSOURI

Personal—Dr Paul Paquin, director of health of Kansas City is reported to be critically ill with paralysis following an attack of meningitis——Dr Fabian L Pratt, Kansas City, who has been on duty for a year and a half in the French army has returned home on a six months' furlough——Dr Daniel R Hill Joplin has been appointed district physician for the Jasper County Public Health Committee

St. Louis

Personal—Dr Frederick Hagler, who recently returned after a year s service in Serbia sailed from New York on the steamer *Frederick VIII* for Germany He will work in connection with the American Physicians Expeditions Committee at a base hospital in Munich

Myer Memorial—The committee in charge of the collection of a fund for a memorial of the late Dr Jesse S Myer, and which decided on an addition to the library of the Medical Department of St Louis University, presented the memorial and a portrait of Dr Myer to the university, at the commencement exercises, June 3

Gift to Medical School—It is announced that at a recent meeting the General Education Board appropriated $250,000 for the Medical School of Washington University This makes a total of $1 000 000 which has been given to this medical school by the General Education Board towards a total of $1 500 000 for the purpose of placing the teaching of medicine surgery and pediatrics on the so-called full time basis

NEW YORK

Personal—Dr George P Paul, formerly of Round Lake, Boston has started for Trinidad in the service of the Rockefeller Foundation——Dr George E Blackham, Dunkirk, delivered the commencement address at St John's Military Academy Delafield Wis June 10——Dr Albertus L Fagan has been reappointed health officer of Herkimer for a term of four years

Dental Education in New York—Recent amendments have been made to the New York Public Health law relating to the practice of dentistry The principal change is the requirement of three years work in a registered medical school, or graduation before the student begins the dental course, which has been extended from three to four years For graduates in medicine, a special course of study covering two years in a registered dental school is demanded

New York City

Free Beds at Park Hospital.—The Park Hospital, 395 Central Park West, has available a number of free beds for the care of acute noncontagious cases among the worthy poor Admission will be made on application of the family physician and on presentation of a letter from the physician, containing diagnosis assurance that the case is a proper one for free hospital treatment

New Floating Hospital.—The new floating hospital of St. John s Guild the *Helen C Juilliard,* a model of its kind built and equipped at a cost of $125 000, was shown to the public at a reception given on board the vessel on the afternoon of June 7 The boat has a legal carrying capacity of 2,400 but it is proposed to limit the number to 1,800 in order to improve the service The boat is equipped to care for more serious cases than floating hospitals have been able to handle before and is fitted for service the year around

Personal—Dr Henry W Wandless has been appointed clinical professor of ophthalmology in the University and Bellevue Hospital Medical College——Dr Carroll Chase, Brooklyn, sailed for France on the *Chicago*, June 4 He will do hospital work under the auspices of the American Relief for France and her allies——Dr Bernath Weiss, Jamaica, sailed for Europe, May 29, on the *Nieuw Amsterdam*, and expects to join the sanitary corps of the Austrian army——Dr Harold Neuhof was awarded the Alumnus Association prize of $500, awarded biennially to an alumnus of the College of Physicians and Surgeons for the best medical essay submitted on any subject the writer may select——Dr Vera Dantaschakoff has been elected instructor in surgery at the College of Physicians and Surgeons, and Dr Rosalie Slaughter Morton, attending physician at the Vanderbilt Clinic This is the first time in the history of the college that instruction will be given by women lecturers

Typhoid Fever Among Hospital Employees—Two orderlies employed at St Mary's Hospital, Jamaica, have typhoid fever, a nurse is employed at Riverside Hospital who gives a history of having had typhoid fever some four months ago, and in addition there are several other cases of typhoid fever in the city hospitals In view of these facts the department of health has sent a letter to all the hospitals in New York calling attention to the unprepared condition of the hospitals, from a defensive point of view, as shown by the fact that several employees have contracted the disease from patients suffering from typhoid fever The department requests that an investigation be made of the previous histories of all employees coming into contact with patients in any way, whether or not they have typhoid fever, and that examinations of feces and urine be made to determine if they are carriers I is further urged that all employees be at once immunized against typhoid fever The necessary vaccine will be furnished gratis by the department

OHIO

Gorgas in Dayton—At the annual meeting and banquet of the Engineers Club of Dayton, May 31, Maj Gen William C Gorgas, Surgeon-General, U S Army, was the guest of honor His address detailed the benefits of sanitation and medical discovery in Cuba and Panama

Personal—Dr John C Reeve, Sr, Dayton, celebrated his ninetieth birthday anniversary, June 5, and was the guest of honor at a dinner given by the Medical Society of Dayton at the Dayton Club——Mr A G Lohmann, superintendent of the German Deaconess Hospital, has been elected president, and Dr Eli R Crew, superintendent of the Miami Valley Hospital, a member of the executive committee of the Ohio Hospital Association

Cincinnati

New Rule at General Hospital—It is announced that a rule is to be enforced that no physician or surgeon of the Cincinnati General Hospital can hold a similar position on the staff of any other hospital It is also proposed that a chief of service in each department shall be appointed who will be a whole time officer and be in supreme control of that department

Personal—Dr William Muhlberg, assistant medical director of the Union Central Life since 1907, has been elected medical director, succeeding the late Dr Clark Wasgatt *Davis*——Dr Walter H Stix has been appointed junior to the medical department of the Cincinnati Hospital, succeeding Dr Louis G Heyn, promoted to the senior staff——Dr Joseph Ransohoff has been appointed director general and Dr Nora Crotty, secretary, for the state of Ohio, of the National Society for the Control of Cancer——Dr Derrick T Vail has resigned as a member of the senior staff at the Cincinnati General Hospital after a service of fifteen years

The Drake Memorial—The memorial tablet of Dr Daniel Drake at the Cincinnati General Hospital, which was presented by Mrs Elizabeth Drake Morrill Edwards, great granddaughter of Dr Drake, was unveiled with impressive ceremonies, June 10 After introductory remarks by Mayor Puchta, Dr Joseph Ransohoff delivered an address on "Dr Daniel Drake, the Founder of Medical Education in Cincinnati" The tablet was then presented to the medical faculty of the University of Cincinnati by Mr Burgess Allison Edwards, son of the donor, and was accepted on behalf of the medical faculty by the dean, Dr Christian R Holmes The tablet was then unveiled by Elizabeth Drake Morrill, great, great granddaughter of Dr Drake The tablet is the work of Clement J Barnhorn and bears the legend "1785-1852, Creator of the Cincinnati Hospital and Ohio Medical College, Builder of Civilization in the Ohio and Mississippi Valleys, Daniel Drake, M D"

PENNSYLVANIA

Adopts Higher Requirement—An official communication from the Hahnemann Medical College of Philadelphia states that two years of college work will be required for admission to that institution for all students who matriculate in the session of 1917-1918 and thereafter

Personal—Dr Edgar M Green, Easton, has been appointed a member of the advisory board of the state department of health, succeeding the late Dr *George W Guthrie, Wilkes-Barre*——In the suit for damages for alleged malpractice against Dr James W G McLaughlin, Beaver Falls, by Ira L and Anna Clear, the jury brought in a verdict, May 31, in favor of the physician——Dr William S Wheeling, Spangler, chief surgeon of the Windber Hospital, is convalescent after a serious surgical operation

Philadelphia

Hospital Buys Building Site—The Rush Hospital for Consumptives at Thirty-Fourth Street and Lancaster Avenue has purchased a plot of ground 175 by 100 feet on Lancaster Avenue, east of Thirty-Fourth Street, adjoining the hospital building The site will be used for an addition to the buildings of the institution

Tablet Unveiled—At the annual commencement exercises of the Women's Medical College of Pennsylvania, May 31, the epitaph bas relief tablet, "The Woman Physician," was unveiled with appropriate ceremonies The tablet was presented by Dr Rosalie Slaughter Morton, New York, of the class of '97, and is the work of Miss Clara Hill

Completes Endowment Fund—Jefferson Medical College will take with it into the merger with the University of Pennsylvania an endowment fund of $200,000 A year ago Daniel Baugh promised to give the college $100,000 if a like sum should be subscribed by June 16, 1916 The last $1,400 of the sum was raised at the annual dinner of the Jefferson Alumni Association on the evening of June 2

Personal—Dr Albert P Brubaker received the honorary degree of Doctor of Laws at the graduating exercises of the Franklin and Marshall College, June 8——Dr R Tait McKenzie, head of the Physical Education Department of the University of Pennsylvania, who has been in the British service during the past year, will return and resume his duties at the university next September

Correction—In the issue of The Journal of the American Medical Association, May 27, p 1735, under the caption of "Scholarships and Loan Funds in Medical Schools," the Woman's Medical College, Philadelphia, is credited with just one scholarship During the session of 1915-1916, seventeen students were assisted to the following extent one student received $75, three, $100, one, $125, one $150, ten, $175, (full tuition), one, $250, total, seventeeen, $2,650

Public Health School—The merger of the Medical School of the University of Pennsylvania with the Medico-Chirurgical and Jefferson Medical Colleges may be the means of securing for this city a school of public health which the Rockefeller Foundation has signified its intention of placing in an Eastern university For several months a committee from the Rockefeller Foundation has been contemplating the University of Pennsylvania as a site for the school

Medical Club Holds Reception—The guests of honor at the reception of the Medical Club of Philadelphia held at the Bellevue Stratford, June 9, were Dr John B McAlister, Harrisburg, president of the Medical Society of the State of Pennsylvania, Dr Charles A E Codman, president-elect of the Medical Society of the State of Pennsylvania, Dr Alexander Marcy, Jr, Riverton, N J, representing the president of the Medical Society of New Jersey, and Dr George I McKelway, Dover, Del., president of the Delaware State Medical Society

Dr White's Benefactions—In addition to the bequests of $160,000 in the will of the late Dr J William White for the University of Pennsylvania and its hospital, the university has been bequeathed all medical pictures in Dr White's office and home the death mask of Dr D Hayes Agnew and the cast of his hand the medical faculty of the university is authorized to select from Dr White's library any books it may desire for the library of the medical school, and a fund of between $3 000 and $4 000 made up of gifts from patients is turned over to the University Hospital Charles S W Packard is named as trustee to succeed Dr White in a declaration of trust covering the Weightman donations of $50 000 and the residue of the estate is left in trust for the benefit of the widow and at her death $5 000 is to be paid to the University of Pennsylvania on condition that the trustees invest it for a period of one hundred years after Dr White's death At the end of this period the fund is to be added to the general endowment fund of the University Hospital

RHODE ISLAND

Mental Hygiene Society Organized—The Rhode Island Society for Mental Hygiene was organized and incorporated March 21 Its aims and purposes are to work for the conservation of mental health to assist in raising the standards of care and treatment for those individuals who suffer from or are in the danger of developing a mental disorder to study and assist in the proper care of the delinquent child one of the most important social and humanitarian problems to promote the study of feeblemindedness epilepsy and inebriety and to distribute knowledge concerning the causes, the treatment and prevention The officers are president Rathbone Gardner vice presidents W H P Faunce, and R H I Goddard, Jr treasurer Zechariah Chafee, executive committee, Dr G Alder Blumer Providence, Dr Arthur H Harrington Howard Dr Charles A McDonald Providence, Dr Arthur H Ruggles Providence Prof James Q Dealey, Judge Howard P Gorham and secretary, Dr Frederic J Farnell, Providence

New Officers for State Society—At the annual meeting of the Rhode Island Medical Society held in Providence June 1 the following officers were elected president, Dr Edmund D Chesebro Providence vice presidents Drs John Champlin, Westerly and Gardner T Swarts Providence secretary, Dr James W Leech Providence, and treasurer Dr Winthrop A. Risk, Providence. Dr William McDonald, Jr, Providence read a paper on The Light Under the Bushel" and Arthur L Hill, Boston made an address on Some Randon Thoughts on Law and Medicine. At the annual dinner Dr G Alder Blumer Providence, served as anniversary toastmaster The principal speaker of the evening was Dr Frederick M Allen of the Rockefeller Institute for Medical Research New York, whose subject was Diabetes ' The Fisk fund prize for the year was awarded to Dr Allen G Rice, Springfield, Mass., for his essay on The Value of Blood Pressure in the Diagnosis and Prognosis of Disease."

CANADA

Personal.—Dr Alex D W Kay resident physician at the Victoria Hospital, London Ont., has been appointed superintendent of St. Luke's Hospital Ottawa——Maj William E. Nelson, Westmount, Montreal has gone overseas and will be attached to one of the hospitals in France.——Dr Charles E. A. Trow Shakespeare, Ont., has joined the Canadian Army Medical Corps——Capt W Thomas B Edmison, Hastings Ont., is attached to the Ramsgate Military Hospital, Ramsgate. England——Dr David Donald Victoria B C., has returned from the front and is now attached to the Canadian Headquarters Staff London, England

Ontario Medical Association Meeting—The annual meeting of the Ontario Medical Association was held in Toronto, May 31 to June 2 Considering the fact of war time, the attendance of over 450 was very gratifying to the officers in charge. Dr Harry B Anderson Toronto presided. Referring to medical education in the province he advocated a strict uniform examination for the practice of medicine, and no granting of special privileges to those not properly trained. On organization of the medical profession, Dr Anderson stated there were now thirty-five local medical societies in the province ready to affiliate with the Ontario Medical Association. Dr Elliott P Joslin, Boston read a paper on the "Treatment of Diabetes Mellitus" Prof Alexander D Blackader Montreal, delivered an address on Drugs and Medicinal Agents" After the war he thought that the Canadian physician should favor the home-made or British made product, as certain lines of drugs commenced to be manufactured in Canada had proved eminently satisfactory The president stated after this paper had been discussed that the Dominion government had notified him that it purposed revising the "patent medicine" act and advised the association to make representations to the government along such lines The following committee was appointed to take charge of the matter Drs Robert D Rudolf, Charles P Lusk, John Ferguson, Toronto, James Third Kingston, Paul L Scott, Toronto and James H Mullin, Hamilton Prof Solomon Solis Cohen, Philadelphia, gave an address on "The Treatment of Pneumonia"

A very interesting and profitable demonstration of the use of moving pictures in showing the surgical technic as used in the New York Polyclinic was given by Drs John A Wyeth John A Bodine and Charles H Chetwood all of New York Dr Weston A Price, Cleveland introduced an intesting paper on Mouth Infections and Some of the Mechanisms by Which They Produced Localized and Systemic Diseases" Senator J S McLennan vice chairman of the Dominion Military Hospitals Commission, spoke at some length on the plans of the commission in dealing with invalided soldiers Drs George W Ross and Herbert K Detweiler Toronto, told how common 'colds' could be prevented by inoculation Their method consisted in the inoculation of a mixed vaccine prepared from the culture of different strains of organisms obtained from patients suffering from colds The following officers were elected president Dr A Dalton Smith, Mitchell, Ont, general secretary, Dr F Arnold Clarkson Toronto assistant secretary Dr Frederick C Harrison Toronto, and treasurer Dr Jabez H Elliott Toronto The social functions consisted of two garden parties one at Dentonia Park farm, and the other on the beautiful grounds of Sir John Eaton

GENERAL

Wine of Cardui Suit.—At the time of going to press the defendants—the American Medical Association—have presented evidence in surrebuttal and have closed their case On Tuesday June 13, Mr Hough attorney for the Chattanooga Medicine Co addressed the jury, opening the argument for the plaintiff On Wednesday Mr T J Scofield, attorney for the American Medical Association, presented the argument for the Association

Medical Men of District and Virginia Meet.—At the biennial session of the Medical Society of Northern Virginia and District of Columbia held at Herndon Va, June 2, the following officers were elected Dr Harry A Fowler, Washington president Dr Charles Franklin Russell, Herndon, and Llewellyn Powell Alexandria, Va., vice presidents, Dr Joseph D Rogers Washington, corresponding secretary, and Dr William I Robey, Herndon, treasurer

Divisions of Mental Hygiene and Rural Sanitation for Public Health Service—The House of Representatives, June 8 passed the bill to provide divisions of mental hygiene and rural sanitation in the Public Health Service The division of mental hygiene is to study and investigate mental disorders and their causes care and prevention The division of rural hygiene is to investigate improved methods of rural sanitation and the prevention and suppression of communicable diseases A similar bill is already pending on the Senate calendar

Military Training for Medical Men—Physicians and medical students will have an opportunity of receiving training at Fort Benjamin Harrison, Ind., where a military training camp will be opened July 5 Field Hospital No 1, under command of Maj William W Reno, M C., U S Army, has been ordered to Fort Benjamin Harrison from its station at Fort D A. Russell Wyo Ambulance Company No 1 also stationed at Fort D A. Russell will be at the camp in command of Capt. Condon C. McCornack, M C, U S Army All information regarding this camp may be obtained on application to headquarters Central Department, U S Army, Federal Building Chicago

Antinarcotic Law Construed—The United States Supreme Court June 5 affirmed the decision of the United States District Court in the case of the United States versus Jin Fuey Moy and decided that the words any person not registered as used in Section 8 of the law cannot be taken to mean any person in the United States but must be taken to refer to the class with which the statute undertakes to deal—the persons who are required to register by Section 1' Under this decision a person who does not import, produce, manufacture deal in, dispense, sell or distribute the drugs cannot be convicted of violating the Harrison Narcotic Law merely because he has some of the drugs in his possession

Is the Hot Springs Reservation a Park or a Sanatorium?—Representative Sherley of Kentucky has suggested that the Hot Springs Reservation, Ark, is a sanatorium rather than a park, and that it should therefore be under the supervision and control of the Public Health Service rather than of the Interior Department The suggestion was made in the course of a debate on a bill to authorize the Secretary of the Interior to furnish hot water from the hot springs, free of cost, to the Leo N Levi Memorial Hospital Association The bill had already been passed by the Senate and was passed by the House after a committee amendment had been added requiring the hospital association on request of the superintendent of the Hot Springs Reservation, to send an ambulance for and to accept and treat without charge therefor any emergency patient sent to the hospital for treatment The bill now goes back to the Senate for action with respect to the House amendment

Coca Cola Case Reversed by U S Supreme Court—For several years past the United States has been pursuing "Forty Barrels and Twenty Kegs of Coca Cola, The Coca Cola Company of Atlanta, Ga Claimant," through a libel for condemnation, in the federal courts The district judge directed a verdict in favor of the claimant, the Coca Cola Company, and judgment was entered accordingly The Circuit Court of Appeals affirmed the judgment and the case was then carried to the Supreme Court of the United States May 22, the Supreme Court reversed the judgment and remanded the cause for further proceedings in conformity with its opinion Mr Justice Hughes delivered the opinion of the court

In the prosecution of this case the government alleged in substance that Coca Cola was adulterated in that it contained an added deleterious ingredient, caffein, which might render the product injurious to health and that it was misbranded in that the name "Coca Cola" was a representation of the presence of coca and cola, whereas it contained no coca and little if any cola and was thus an imitation of these substances and sold under their distinctive name The Coca Cola Company admitted the presence of caffein but denied that it was an 'added" ingredient within the meaning of the law and that it was a poisonous or deleterious ingredient which might make the product injurious The company denied that there were substances known as coca and cola "under their own distinctive names" and averred that Coca Cola did contain certain elements derived from coca leaves and cola nuts

Whether caffein was or was not a poisonous or deleterious ingredient which might render Coca Cola injurious to health was not determined at any point in the case, since the courts below decided that it was not an "added" ingredient within the meaning of the law, thus sustaining the contention of the Coca Cola Company The contention of the company was based on the claim that Coca Cola was a compound, known and sold under its own distinctive name, of which caffein was a usual and normal ingredient, and that therefore caffein could not be an "added" ingredient The Supreme Court disposes of this contention in the following language

> "The fundamental contention of the claimant, as we have seen, is that a constituent of a food product having a distinctive name cannot be an 'added' ingredient In such case, the standard is said to be the food product itself which the name designates It must be, it is urged, this 'finished product' that is 'adulterated' In that view, there would seem to be no escape from the conclusion that however poisonous or deleterious the introduced ingredient might be, and however injurious its effect, if it be made a constituent of a product having its own distinctive name it is not within the provision If this were so, the statute would be reduced to an absurdity Manufacturers would be free, for example, to put arsenic or strychnin or other poisonous or deleterious ingredients with an unquestioned injurious effect into compound articles of food, provided the compound were made according to a formula and sold under some fanciful name which would be distinctive"

In the courts below the right of the Coca Cola Company to use the words "coca" and 'cola" for its product was sustained, irrespective of the presence or absence of either of the substances named, or of any product of either of them, on the ground that the name "Coca Cola" was a "distinctive" name and therefore within the protection of the proviso relating to articles sold under distinctive names The government contended that these words were descriptive, conveying to the purchaser the impression that the article contained coca and cola, that in so far as they were distinctive of anything they were distinctive of coca and cola, and that an article sold as "Coca Cola" that did not contain coca and cola was therefore misbranded On behalf of the company, it was claimed that while "coca" indicated one article and "cola" another, the two names taken together did not constitute the distinctive name of any other substance or combination of substances Of this the Supreme Court says, in part

> "To call a compound by a name descriptive of ingredients which are not present is not to give it 'its own distinctive name'—which distinguishes it from other compounds—but to give it the name of another compound"

This decision of the Supreme Court materially strengthens the hands of the government in its operations under the Food and Drugs Act.

FOREIGN

Identification Records of the Insane and Feebleminded in Spain—The province of Madrid is collecting finger-prints and other identification data of the inmates of all the asylums for the insane and feebleminded, etc

Deaths in the Profession Abroad—H G Blessing of Christiania who was physician and botanist to the Nansen polar expedition in the nineties——P Redard, medical superintendent of the Cannes health resort in France, and physician in chief to the state railroads——V Campenon, until recently professor agrege of clinical surgery at the University of Paris, aged 70

Physicians Elected Members of Spanish Legislature for Life—Our Madrid exchange, the *Siglo Medico,* congratulates the profession on the recent elections which have added materially to the number of physicians in the Spanish senate The Spanish universities are each entitled to a representative in the senate, and five have selected physicians for this position There are now sixteen medical senators, most of them *senadores vitalicios,* that is, electod for life Two of the latter, Cortezo and Pulido, are the editors and publishers of the *Siglo Medico* The list of life senators includes also Cajal, Morejon and Ocaña

WAR NOTES

French Hospital Needs Funds—An appeal for funds to be used in the maintenance of the Ris-Orangis Military Hospital, near Paris, of which Dr Joseph A Blake, formerly of New York, is the head, has been issued by Harold J Reckitt, the treasurer of the fund in this country It is estimated that $60,000 will be needed for the maintenance of the institution during the next twelve months

Contributions Gratefully Acknowledged—Receipt of the second contribution of $5,000, made by the American Red Cross toward the support of the International Prisoners Bureau in Geneva, has been acknowledged This bureau is conducted by the International Red Cross Committee as a clearing house of information between relatives of soldiers and sailors of all countries engaged in the war——A letter has been received from Henryk Sienkiewicz, president of the Polish War Committee, acknowledging the receipt of $8,000 transmitted by the American Red Cross for the relief of Polish war sufferers

LONDON LETTER

London, May 29, 1916

The War

THE WAR AND THE PROFESSION

At the general medical council the president, Sir Donald MacAlister, in his address reviewed the position of the profession with regard to the war He pointed out that the demands of the military and naval services continued to put a severe strain on the resources of the profession The central and local committees have been established to recruit for these demands, and at the same time to leave a fair provision for the medical needs of the civil population It was expected that in 1915, the first complete year since the war began the number of physicians added to the register, and available for military or civil work, would show a perceptible decrease This would probably have been so but for the decision to recall from the combatant ranks medical students of the senior years, and but for the establishment of reciprocity with the dominions and with Belgium In the result, the number of registrations in 1915 was 1 526, or 354 in excess of the average (1,172) for the preceding five years The question of maintaining, in this and in future years a supply of newly qualified physicians sufficient for the needs of the country, continues to engage attention The calling up of junior medical students, under the successive systems of recruiting, has given rise to some anxiety The number of students who during 1915 began medical study was 1 935 The number of first-year women students was 456—an enormous increase The number of second-year students was 1 020 The average annual entry of first-year students registered during the preceding five years was 1 441 In 1915 there were thus nearly 500 first-year medical students in excess of the average annual number registered in the preceding five years At the beginning of the present year the number of first-year students in actual attendance on instruction at medical schools (apart from teaching institutions) was 1 626 The expected depletion of students, as compared with normal years had thus been more than compensated by new entries and if things remained as they were the position four years hence would not be unsatisfactory It was thought advisable however to recommend that exemption from military service, already conceded to fourth-year and fifth-year students, should be extended to third-year students who showed their proficiency in the earlier subjects of the curriculum by passing a third-year professional examination at the end of the winter session An order to this effect was accordingly issued from the War Office

AMERICAN MEDICAL MISSION IN ENGLAND

A medical mission appointed by the United States government to study war conditions in Europe has arrived in England Its members are Colonel Bradley, Major Lyster and Major Ford of the United States Army, and Surgeon Pleadwell of the United States Navy They were entertained at dinner at the Athenaeum Club May 24 by Director-General of the Army Medical Service Sir Alfred Keogh and Sir William Osler when they had an opportunity of meeting a number of officers of the Royal Army Medical Corps the Canadian Army Medical Corps and the Medical Service of the Royal Navy The American ambassador was also present and paid a tribute to the work of the medical services of the United States Army and Navy in suppressing yellow fever and malaria and in bringing ankylostomiasis under control in Porto Rico and the Southern States The mission will begin by inspecting the system of treating the sick and wounded in this country and then go to France to study the hospitals and medical arrangements

The Suitability of the White Man for the Tropics

At a meeting of the British Science Guild Mr Andrew Fisher high commissioner for Australia delivered a remarkable address in which he described the operations of the Institute of Tropical Medicine in Queensland part of whose investigations related to the effect of climatic conditions As far as their statistics guided them he said it would appear that Europeans had a better chance of life in the tropical portions of Australia than in the temperate zone of that continent. It was remarkable as the latest figures showed that Queensland largely a tropical state had at once the highest birth rate and the lowest infantile death rate in Australia This was a matter of worldwide importance It was an interesting human experiment confined not merely to a selected locality but applied to a country three times as large as the United Kingdom It was also of vital interest to Australia for it was hoped that it would decide the question of climatic influence on the white man in the tropics the maintenance of whom was a principle to which Australia has pinned her faith as a nation

PARIS LETTER

Paris, May 25, 1916

The War

THE MEDICAL RECORDS OF THE WAR

M Justin Godart, undersecretary of state for the medical service of the army, has just decided to collect the medical archives of the war at the Military School of Practical Medicine and Pharmacy at Val-de-Grace The object is not merely to put on record the activities of the medical service but also and more especially, to communicate the lessons of the war immediately to practitioners For this purpose military surgeons have been requested to send at once to Val-de-Grace all documents and exhibits of interest. The matter so collected will be divided into three categories (1) exhibits (2) archives and (3) library The exhibits will deal with the general organization of the material of the medical service at the front and in the interior of the country (models of full or reduced size, of transports and hospital material), hygiene and epidemiology (models of sanitary installation), military surgery (weapons projectiles and their relation to wounds), instruments and apparatus of all kinds (surgery, radiology, physiotherapy, and mechanotherapy), prostheses and casts, anatomic specimens, chemistry and pharmacy (asphyxiating gases, etc.) In the archives will be assembled instructions and circulars of the heads of the medical service The papers of the sanitary formations (these will be deposited after the end of the war), reports of specialists, reports explaining the exhibits, graphs, diagrams, drawings and photographs of all kinds relating to the organization of the service (photographs of sanitary formations transports and hospitals, hygienic installations, etc), as well as the material for the anecdotic history of the service in the field The library will contain books concerning the medical service as well as reprints from the medical publications relating to the war

ANTITETANIC SEROTHERAPY AND ANAPHYLAXIS

At the Reunion medico-chirurgicale de la V-e armee, Dr. Genouville described five cases in which he employed, with antianaphylactic precautions, the injection of antitetanic serum in cases of wounded men who had already received an injection of this serum for previous wounds First the injection of 1 c c was given very slowly in a vein of the elbow, and a few minutes later an injection of 10 c.c hypodermically The only phenomena noted were a slight serous eruption in one, a transient fever in another, a third person, a few minutes after an intravenous injection, developed a cough and slight faintness which lasted a quarter of an hour This man had received a wound of the thigh from a fragment of shell two days before He had breathed tear-producing gases and showed signs of bronchitis The subcutaneous injection was postponed until the next day, and produced no inconvenience It is fair to ask oneself in this case, whether the inhalation of the gases had not some causal relation with the phenomena observed At any rate, these new observations show that if appropriate antianaphylactic precautions are taken, one can without danger practice antitetanic injections on every wounded soldier even if he has received an injection of the same serum several months before

Dr Duperie remarked that there was no theoretical reason why the irritation of the respiratory apparatus by asphyxiating gases should be regarded as a contraindication to antitetanic serotherapy The irritation even generalized, of the broncho alveolar structures does not seem to produce a condition of anaphylaxis in the same way that infectious diseases do when there is pulmonary localization such as tuberculosis and its larval form asthma There is however, some fear that a second injection of serum in those who are suffering from gassing' may provoke serious symptoms owing to the congestion of the pulmonary system, as a result of asphyxiation In this case one is justified in guarding against anaphylaxis by using Besredka's method On the other hand, the mildness of the immense majority of anaphylactic incidents which occur after the second hypodermic injection of serum seems to justify in the present circumstances and in ordinary cases the omission of Besredka's precautions This, however is not true for reinjections given intravenously or intraspinally The severity of the anaphylactic symptoms in these conditions calls for the greatest prudence

NONMAGNETIC STEEL INSTRUMENTS

Dr Bergonie professor of biologic physics and medical electricity at the Faculte de medecine of Bordeaux, has presented to the Societe de chirurgie de Paris instruments in appearance similar to those in daily use but which have the peculiarity that they do not start vibrating in the neighborhood of electromagnets This property allows of their use in the extraction of projectiles by means of Bergonie's electrovibrator It was indeed one inconvenience of Bergonie's method that during the exploration in this operation, it was necessary to put aside forceps and so to deprive oneself of the aid of separating the lips of the wound because even any nonmagnetic substances such as copper and silver will vibrate and cause error Bergonie has used a new metal which is not affected either by attraction or vibration caused by electrovibrators This metal is a steel alloy

Death of Dr Assicot

The death is announced of Dr Assicot, intern of the Paris hospitals and of the ophthalmologic clinic of the Faculte He had been professor of clinical ophthalmology of the school of medicine at Rennes since 1907 After serving through the first part of the campaign he was appointed chief of the ophthalmologic center at Saint-Malo From there he was sent as battalion surgeon to Verdun, and was killed at his post four days after his arrival at the front

(Continued on page 2000)

PROCEEDINGS OF THE DETROIT SESSION

MINUTES OF THE SIXTY-SEVENTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT DETROIT, MICH, JUNE 12 16, 1916

HOUSE OF DELEGATES

First Meeting—Monday Morning, June 12

[NOTE—Practically all of the minutes as they appear this week are the official reports of committees as originally prepared and appearing in the Handbook of the House of Delegates During their presentation slight additions were made which are noted as addenda at the end of the report of the first session]

The House of Delegates met in the auditorium of the Wayne County Medical Society Building, and was called to order at 10 15 a m by the President, Dr Albert Vander Veer, Albany, N Y

Dr D Chester Brown, Connecticut, chairman, reported that the Committee on Credentials had examined and approved the credentials of delegates which conformed with the rules of the House One hundred and ten delegates were seated The President thereupon declared the House duly organized

The Secretary called the roll and announced a quorum present

The next in order were the presentation, correction and adoption of the minutes of the sixty-sixth annual session, held at San Francisco

The Secretary stated that the proceedings of the House of Delegates of the sixty-sixth annual session, held at San Francisco, had been published and a copy sent to each member of the House of Delegates There were but two suggestions made in the way of correction of the minutes, one of which was received from an Eastern state, and the other from a Southwestern state, asking the Secretary why the record of the executive session of the House of Delegates had not been incorporated in the official minutes as published The Secretary stated that the record of this executive session was *not incorporated in the minutes* because in accordance with usage and custom, minutes of such executive sessions were treated as is a committee of the whole

The Secretary further stated that the Judicial Council in presenting that section of its report dealt with the discipline of members, adding to the published report the names of those disciplined

Dr Edward Guion, New Jersey, moved the adoption of the minutes of the San Francisco session as printed Seconded

Dr Herbert B Gibby, Pennsylvania, moved as an amendment that the minutes of the sixty-sixth annual session be corrected so as to include other minutes of the executive session Seconded

Dr Guion having withdrawn his motion, the motion of Dr Gibby was put and carried

Dr Guion moved that the minutes as printed and corrected be approved

Seconded and carried

Address by the President, Dr Albert Vander Veer

Reports of officers being the next order, President Vander Veer delivered the following address, which was referred to the Reference Committee on Reports of Officers

President's Address

To the Members of the House of Delegates of the American Medical Association

I approach the duties of today with great sorrow Our late President, Dr Rodman, was a dear friend of mine, and the news of his death, while he was engaged in the activities of his professional responsibilities, was a shock to us all Let us perpetuate his memory through our earnest desire to continue his labors, without their excellence

Obituary notices have been presented to THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, and to his bereaved family we can only express our deep sympathy

If one reads with care the necrology list of the past year, in THE JOURNAL, it is exceedingly impressive In addition to President William L Rodman, Fellows like Samuel B Ward, Wisner R Townsend and Henry L Elsner of New York State, Henry B Favill of Illinois, Frank J Lutz of Missouri, and many others will be greatly missed "Lest we forget," may the heritage of their "work well done" be an incentive to those of us yet remaining

While not taking too much of your time, let me bring before you some of the important questions which, to me, seem worthy of your consideration

MEDICAL LAWS

Members of such a representative body as this House of Delegates should ever be on the alert favoring good, and opposing evil laws, and it would seem that, in consultation and discussion with each other, it is possible for us to succeed in framing such acts as are best suited to meet the conditions existing in each particular state

The consolidation of medical colleges, the requirements in preparation, exacted from the medical student, and limited enrolment, while all tending to increase the efficiency of the graduate, must also necessarily lessen their numbers

It would seem proper for our educators to move somewhat cautiously in too severely limiting our output of physicians At the present time, there is quite a demand for a good, reliable doctor, at many of the so-called country crossroads

Dr Horner, in charge of the Department of Professional Examinations, Education Department of New York State, informs me that a recent amendment to the public health law of New York relates to the legal requirements of the beginning of medical study It does not materially advance the present requirements, but places in the hands of the Board of Regents of the University of the State of New York the power to do as they deem proper from time to time This *act of the legislature will place* the state of New York on the same plane as high as any other in the Union

It must be a great source of comfort to our President Elect to note how rapidly the quarantine stations of our larger cities are coming under government control Very recently *Governor Whitman* signed the bill placing the port of New York under United States super*vision* All of this means harmony of action in preventing the entrance and spread of diseases of a contagious and infectious nature Only recently has the legislature of the state of New York enacted laws permitting the state board of health to enforce its *rule* regarding vital statistics, especially in births and deaths

MEDICAL INSPECTION *IN SCHOOLS*

Two years ago the legislature of the state of New York passed a law appointing a *state medical* inspector of school

Dr Finegan, our assistant commissioner of education, has tabulated much of the work accomplished by *medical* inspection, at various times, and finds that over 90 per cent of the schoolchildren are physically deficient in some form or another, that is, enlarged tonsils, adenoids and such various conditions as are incident to early childhood, but this is also to be observed, that in cities in which medical inspection has been going on for a few years there is a much smaller percentage of these children than in the rural districts where inspection is not yet made so thorough

In a recent letter from Dr Howe, the inspector, he makes the following statement

"It is indeed gratifying to know the material progress being made in many sections in medical inspection in schools

"More than one half of our states now recognize its great value and have provided for its enforcement by statutory measures while most cities are conducting a systematic plan to better conserve the health of the schoolchild This health service is really at the foundation of true preparedness of our country as without strong bodies little could be accomplished in national strength

"Closely allied to this special feature of educational work —for it is largely educational and made possible by its success—we find physical education and physical training provided for by the legislature of the state of New York

As a medical profession we will I am sure, welcome the opportunity to lend our united influence to the upbuilding of any system having for its sublime purpose the welfare of the children of our country"

INDUSTRIAL DISEASES

This new classification, or addition to our previous nomenclature should receive more serious consideration

In this connection our laws relating to workmen's compensation—the subject that is now so prominently presented —should receive greater attention from the medical profession This duty is plainly manifest in the administration and settlement of claims Much thought is also now being given to the investigation of health insurance

TRUDEAU SCHOOL OF TUBERCULOSIS, SARANAC LAKE, N Y

This institution promises to be one of the most important that has yet been organized for the study and treatment of tuberculosis It was opened May 17 1916, its object being to give instruction to graduates and students who are desirous of understanding more thoroughly the treatment of all forms of tuberculosis Among its teachers are some of the most eminent men in America It was organized as a memorial to Dr E L Trudeau It was proposed to raise the sum of $500,000 as an endowment, and this amount is nearly completed the income of which is to be used for conducting the school The announcement and circular give an exceedingly complete outline of the work intended and the encouragement already given

An additional factor in medical education is presented in a summer school, in connection with the Rome Custodial Asylum for teaching special classes in the public schools and institutions for the feebleminded Dr Bernstein, the superintendent, will be pleased to give full details regarding this work

I should be pleased to have these few remarks received as suggestions that as soon as the delegates from the different states and the sections forming the American Medical Association are appointed they meet as separate bodies prepare a report regarding the work accomplished in their particular territory, and send this to the President of the Association for his consideration, he to report on it to the House of Delegates

PREPAREDNESS

How much is implied by this term at the present time! Patriotism defines the situation exceedingly well, and is to be noticed in the parades of citizens in our cities, and the efforts that are being completed for observance of Flag Day in so many of our states Business and professional men in every walk of life have united with an earnestness most impressive My vivid personal remembrances of our unpreparedness in the beginning of our Civil War, and what has been told me by my late associate, Dr Macdonald, and my son Dr Edgar A Vander Veer regarding the unpreparedness they had to contend with as medical officers in the Spanish-American War lead me to call your attention to the situation as it exists today of that exceedingly important aid to our government, in time of distress, namely, the medical profession of this country Surgeon-General Gorgas is thoroughly alert, and his strong stand in his strong position has been of great help to Congress in framing suitable legislation

The American Medical Association has a strong organization in connection with Red Cross work

As will be noted by the report of the Committee on Red Cross Work presented at this meeting the committee is thoroughly alive to the situation and when once it is indicated what the classification of the work is that is required from the medical profession, the machinery will be started with no doubt, excellent results following

During the fall of 1915 the Clinical Club of Albany, composed of about fourteen of the younger men in the profession discussed the situation, and by December had formulated a plan which they considered of sufficient importance to present to the Surgeon-General's Office This outline has been much admired and discussed by those in authority in the surgeon-general's department, and it seems very proper to present the following editorial entitled "The Albany Idea" which appeared in the June, 1916, number of the *Military Surgeon*

"A very practical method of instruction in the methods and purposes of medical preparedness is being employed by the Clinical Club of Albany N Y There is first a preliminary course, by reading lectures and discussions on the various subjects necessary to the training of medical reserve officers To facilitate this work, typewritten pamphlets, which are brief digests of the subjects of which they treat, are prepared and distributed among members to be read at leisure For example, one on organization has already been issued, and others on the duties of medical officers, etc., are nearly finished

"The club then proceeds to the solution of definite problems such as might reasonably arise in war, are of local importance and are within such limitations as could be expected in actual service It is assumed, for example, that both New York and Boston have been occupied by the enemy and that our forces are retiring from these points slowly and in good order, toward Albany in the vicinity of which a strong defense is planned An hypothetical enemy sympathizer is detected contaminating the local water supply —and the club sets itself the task of determining the nature and degree of contamination and restoring purity The assumption is made that Albany is suddenly called upon to care for 100 000 refugees from New England and Southern New York largely destitute women and children—and the club works out the local resources probably available for the food shelter and care of such persons Engagements resulting in 100 000 wounded in the course of a few days from actions near Hudson N Y and Pittsfield Mass are assumed, and the club, dividing itself into committees ascertains the local resources available to assist in their care, including transportation medicines, dressings operating and hospital facilities, antitoxins and vaccines food clothing milk nurses beds and bedding buildings especially suited to hospital purposes, etc All these main subjects are further gone into under many subheads, and the study is carried out with much detail and thoroughness For example, the milk question alone is handled under fourteen subheads

"This is the kind of practical study which we want It not only visualizes the problem but gives it a local color which cannot fail to add greatly to its interest Whether war conditions would create exactly such a problem as is assumed is of no importance It serves its purpose if it shows the need of preparedness, if it demonstrates the importance of cooperation, if it trains the mind not only to conceive of the various difficulties which may arise but to progress in logical way to their solution Solving one problem makes the next easier Solving them in theory in time of peace facilitates their solution in reality in time of war

"A great thing is to accustom one's self to new ideas and unfamiliar mental processes Another most valuable result in this connection is the working out of methods and the enumeration of local resources—in which it is safe to say that many surprises would develop

"The plan contemplates the institution of like inquiry to that begun in Albany throughout the country If it were carried out generally and a summary of the results turned in to the government these would constitute a mass of information which would be very instructive and valuable If Medical Reserve Corps divisions generally would set themselves to finding out what part their communities were prepared to render in war, and if general medical societies would—say twice a year, devote an evening to the discussion of such subjects, it would be a long step in preparedness and patriotism We earnestly commend this matter to their attention"

At the last meeting of the Clinical Congress of Surgeons of America in a general way there was much discussion relative to the efficiency of our medical preparedness in case of any complication that might arise About this time the government appointed an advisory committee of its most prominent citizens as consultants on various industrial subjects

Later, when need for prompt action seemed urgent, I was asked as President of the American Medical Association to cooperate with the presidents of the Congress of American Physicians and Surgeons, the Clinical Congress of Surgeons of North America, and of the American College of Surgeons in appointing a strong committee of American physicians for the purpose of considering plans for civilian medical preparedness At that time, the following communication was sent to those selected

"Dear Doctor

"In view of the fact that the work of this committee may meet any possible military emergency that may arise the presidents of the American Medical Association, the Congress of American Physicians and Surgeons, the Clinical Congress of Surgeons of North America and of the American College of Surgeons have thought it wise to appoint a representative ad interim committee to tender the good offices of the medical profession to the War Department

"In view of the fact that the work of this committee may assume official form, it is important that no phase of the subject may become known before it reaches the hands of the president

"Very sincerely,

"Albert Vander Veer,
"William S Thayer,
"Fred B Lund,
"J M T Finney

"April 9, 1916"

A brief outline of some phases of the subject which will come up for consideration follows

1 To provide a carefully selected list of highly efficient men, especially in the essential lines of work as follows

(*a*) A body of men whose training and experience would fit them peculiarly for sanitary work, etc (*b*) A group whose training, experience and life's work show them to be especially equipped for duty in the line of internal medicine (*c*) A list of men whose surgical training, experience and practical results show them to be eminently qualified for surgical work

2 In addition to the foregoing, the committee could classify its lists according to age, etc, thereby aiding in the selection of civilians suitable for military duty at the front and at base hospitals, make a classification of hospitals, their capacity and efficiency, and aid in developing at as many hospitals as seems advisable, units composed of surgeons, internists, assistants, nurses, orderlies and others, with drills, suitable to military requirements (Motion pictures of such work would materially aid civilian units in learning military necessities)

3 The committee could urge the great technical advantage of having trained medical, surgical and sanitary observers at every military and naval front and at base hospitals for the purpose of noting and reporting to the United States government the actual advances and deficiencies daily arising in the management of those most important features of warfare the prevention of outbreaks of disease, the best handling of the wounded, the prompt healing of wounds, the conservation of limbs, etc, and the prompt return of fighting men to the front It seems that in view of potent possibilities now so apparent, this field of preparedness—the humanizing life-saving feature—should keep pace with the plans for destruction If we should become entangled in a serious conflict, the one certain thing is that our men as well as those of our adversaries will be wounded in large numbers The prevention of disease and the proper care of the sick and wounded will have much to do with the outcome

In addition to the evident advantages of systematic preparation, two practical facts seem apparent In the first place if the committees from the medical profession are working in harmony with the committee on industrial preparedness (composed of representatives of the American societies of civil engineers, of mechanical engineers and of mining engineers and of the American Chemical Society) during times of peace, their mutual needs will be fully understood and can be accomplished with a minimum of friction and waste of energy Secondly, such a critical classification of civilian positions, according to their individual efficiency would materially aid in assimilating any volunteer army with a maximum of speed and efficiency

Following this, a meeting was held at the Union League Club, Chicago, April 14, 1916 The meeting was called to order, and Dr J M T Finney was chosen as temporary chairman Dr Frank F Simpson was chosen as temporary secretary The object of the meeting was stated and approved, and a permanent organization was then perfected by the election of the following officers chairman, Dr William J Mayo, secretary and treasurer, Dr Frank F Simpson, executive committee, the officers, and Dr Albert Vander Veer, Dr William S Thayer, Dr Fred B Lund, Dr J M T Finney, Dr Franklin H Martin, Dr George W Crile, Dr George E Brewer and Dr Robert G LeConte.

On motion, duly carried, the executive committee was requested to confer with the authorities at Washington regarding the advisability of the general plan as outlined in the call for the meeting to formulate such plans as may be deemed advisable after a conference and to call a meeting of the whole committee in the near future, probably at Washington, D C And the following is the list of names of those to whom the foregoing communication was sent Frank Billings, John F Binnie, Joseph C Bloodgood, George Emerson Brewer, George W Crile, George E De Schweinitz, J M T Finney, Charles Gibson, Fred Bates Lund, Edward Martin Franklin H Martin, Rudolph Matas, W J Mayo Charles H Mayo John B Murphy Lewis S McMurtry Albert J Ochsner Charles Allen Porter, Charles A L Reed Emmett Rixford Hubert A Royster F F Simpson Richard P Strong William S Thayer and Albert Vander Veer And there was also appointed an auxiliary committee

April 26, the executive committee conferred with the president of the United States They called attention to the fact that in times of peace as well as in time of war the medical profession has always held itself in readiness out of a spirit of patriotism to serve the best interests of the government, that the European war has demonstrated the greater need for medical men and supplies than formerly was thought adequate or necessary, and lines of service which the civilian medical profession might render were indicated The president expressed himself as being much pleased with the patriotic action of the medical profession and assured the committee that the government would avail itself of the services tendered

Late in April a number of conferences were held with Col J R Kean Director-General of Military Relief for the American Red Cross

The question of cooperation between the committee of American physicians (on preparedness) and the Red Cross was considered carefully by the executive committee at its meeting in Washington May 8 The conclusion reached was that while it is best for the two organizations to maintain their separate identity and to pursue their separate purposes diligently hearty cooperation between the two organizations will result in their mutual advantage and in furthering their common cause To that end, the Red Cross has appointed all the members of the National Committee to membership in the National Committee on Red Cross Medical Service, and Colonel Kean has been appointed an Associate Member of our National Committee

As the following letter from Colonel Kean explains

"May 31 1916

Dr Albert Vander Veer, 28 Eagle Street Albany N Y

Dear Sir

"The Executive Committee of the American Red Cross at its meeting, May 26 1916 appointed you a member of the National Committee on Red Cross Medical Service. This committee consists of thirty-six appointed and ten ex officio members It includes in its membership all the members of the Advisory Committee of Civilian Physicians and Surgeons on Medical Preparedness'—it having been decided on consultation with the executive committee of that advisory committee, that in this way could be best secured the objects which the American Red Cross and the advisory committee have in common and have determined to work for in unison

As a member of this committee you will be asked to advise with the Department of Military Relief of the American Red Cross in the selection of physicians and surgeons for Red Cross organizations and in the enrolment of the profession

"It is requested that you advise this office of your acceptance of this appointment

Very respectfully

"J R. Kean,
"Colonel Medical Corps U S Army
Director General of Military Relief

One element of great importance is the working out of the units forming base hospitals

Fourth Base Hospital Unit Already New York City is thoroughly alive to the situation, public-spirited citizens having furnished the necessary funds for a completely equipped base hospital of 500 beds This was given to the New York County Chapter of the American Red Cross by Mr and Mrs George Blumenthal of that city This unit will cost $24 000, and will be organized in connection with Mount Sinai Hospital The staff will be recruited from the surgeons and nurses of the institution, and will consist of twenty surgeons, forty-six nurses and 125 orderlies Mobilization plans of three units are ready for service, either in the field in time of war, or in the case of extreme emergency at the scene of a great disaster

Reference Committees

At the conclusion of his address, the President announced the appointment of the following reference committees

RULES AND ORDER OF BUSINESS

Dwight H Murray Chairman	Syracuse N Y
G Wythe Cool	Washington D C
Sol G Kahn	Salt Lake City
Jere L Crook	Jackson, Tenn
S D Swope	Deming N M

MEDICAL EDUCATION

L. W Littig Chairman	Davenport Iowa
A H Levings	Milwaukee Wis
William H Seaman	New Orleans
Hugh Mackechnie	Chicago
William S Lalor	Trenton, N J

LEGISLATION AND POLITICAL ACTION

E J Goodwin Chairman	St. Louis
H R McGraw	Denver
F L. Van Sickle	Olyphant Pa
C P Meriweather	Little Rock Ark
Charles W Hannaford	Portsmouth, N H

HYGIENE AND PUBLIC HEALTH

A T McCormack Chairman	Bowling Green Ky
John W Kerr	Washington D C
Eugene R. Kelly	Boston
W S Sawhill	Concordia Kan
John A. Ferrell	North Carolina

CONSTITUTION AND BY LAWS

Floyd M Crandall Chairman	New York
E A Hines	Seneca S C
Jefferson R. Kean	U S Army
C L Stevens	Athens Pa
J J McLoone	Phoenix Ariz.

REPORT OF OFFICERS

A R. Mitchell Chairman	Lincoln Neb
E R. Stitt	U S Navy Washington D C
W E Anderson	Farmville, Va.
B R. McClellan	Xenia Ohio
John O Polak	Brooklyn

CREDENTIALS

D Chester Brown Chairman	Danbury Conn
W A. Coventry	Duluth Minn
J H. J Upham	Columbus Ohio
H. E Randall	Flint Mich
H. P Newman	San Diego Cal.

MISCELLANEOUS BUSINESS

L. J Hirschman Chairman	Detroit
Dean D Lewis	Chicago
Floyd W McRae	Atlanta Ga.
Don Palmer	Seattle Wash
A. E. Bulson Jr	Fort Wayne Ind

The President announced the following Committee on Awards for Scientific Exhibit John B Blake Boston, Chairman, W T Williamson, Portland, Ore., Harlow Brooks New York.

Reports of Officers

Report of the Secretary

The Secretary presented the following report, which was referred to the Reference Committee on Reports of Officers

To the Members of the House of Delegates of the American Medical Association

For the year 1915-1916, I submit the following report

ORGANIZATION OF CONSTITUENT ASSOCIATIONS

Constituent Association of	No Counties in State	No Component Societies in State Assn	Number Counties in State Not Organized		No Physicians in State (5th Ed Directory)	Number Members of State Association		No A M A Fellows in State	No Subscribers to Journal in State*
			1915	1916		1915	1916		
Alabama	67	67			2 560	1 744	1,760	380	217
Arizona	14	11	3	3	307	165	147	120	75
Arkansas	75	66	7	9	2 637	1,169	1,091	354	203
California	58	37	20	20	5,657	2,523	2,703	1,990	579
Colorado	63	23	27	34	1,733	708	811	499	222
Connecticut	8	8			1,678	922	970	529	229
Delaware	3	3			261	107	101	67	21
Dist Columbia					1,482	559	572	364	224
Florida	52	30	19	20	1,321	532	530	236	108
Georgia	152	84	56	56	3 421	1,757	1,415	573	437
Idaho	37	6	20	20	439	138	133	84	125
Illinois	102	98	0	1	10,648	6,501	5,934	3,791	1 781
Indiana	92	87	3	1	4,872	2,441	2,474	1,147	491
Iowa	99	97	2	2	3,751	2 061	2,186	1,235	507
Kansas	105	70	30	27	2,683	1,323	1,475	708	440
Kentucky	120	117	4	2	3,584	1,813	2,373	838	446
Louisiana	64	40	22	22	2 060	803	821	387	288
Maine	16	14	0	2	1,205	625	717	325	136
Maryland[1]	23	21	2	8	2,292	1 166	1,198	744	472
Massachusetts[2]	14	18			5,809	3,505	3,020	2,094	985
Michigan	83	67	2	2	4 300	2,506	2,692	1,565	588
Minnesota	86	38	3	3	2,447	1,569	1,416	1,128	381
Mississippi	80	46	1	4	2,048	979	1 068	238	178
Missouri[1]	114	98	13	11	6,399	3,053	3,097	1,487	672
Montana	42	14	25	25	636	275	220	201	122
Nebraska	93	56	23	25	1,911	1,047	953	540	312
Nevada	16	3	12	13	154	40	40	55	30
New Hampshire	10	10			600	495	508	325	92
New Jersey	21	21			3,239	1,607	1,673	957	417
New Mexico	26	10	15	16	430	154	185	128	75
New York	62	59	2	2	15 670	7,904	8 191	4,777	2,326
North Carolina	100	79	12	12	2,102	1,216	1 211	404	305
North Dakota	52	13	3	3	586	312	351	278	118
Ohio	88	87	2	1	8 045	3,987	4 898	2,153	1,098
Oklahoma	77	74	3	3	2 634	1,270	1,606	743	287
Oregon	35	13	1	8	1,187	520	590	291	302
Pennsylvania[3]	67	63	4	4	11,502	6,157	6,202	3,808	1,531
Rhode Island[2]	5	6			772	412	417	258	102
South Carolina	44	41	5	3	1,399	755	685	323	159
South Dakota	67	9	7	7	676	317	343	255	159
Tennessee	96	60	33	30	3,457	1,150	1,355	625	710
Texas	250	147	73	70	6,240	3,862	3,450	1,532	637
Utah	28	5	24	23	465	216	266	173	76
Vermont	14	11			668	391	384	165	79
Virginia[4]	100	46	51	51	2,547	1 694	1,775	610	336
Washington	39	20	18	18	1,695	896	825	540	298
West Virginia	55	30	12	12	1,729	842	997	541	245
Wisconsin	71	54	1	0	2,803	1,821	1,816	1,063	456
Wyoming	22	5	17	17	251	119	117	63	52
Canal Zone					97	48	61	20	27
Hawaii	5				102	109	69	80	30
Porto Rico					292	138	115	38	35
Philippine Is					735	98	94	27	77
Totals	3 013	2,074	586	586	146 5[illegible]7	76 020	78,301	41,905	20 [illegible]33
Fellows listed at foreign addresses, Honorary and Affiliate Fellows								97	
Fellows in government services								1,179	
Number on Fellowship roll, May 1, 1916								43 181	
Number on mailing list of The Journal, May 1, 1916									64 200

* Not including Fellows of American Medical Association

Note —The number of members of the different associations stated in this table is in accord with the membership of the several associations as they were reported to the Secretary on May 1 1916 The lack of an effective uniform system for reporting the membership of the state associations accounts for whatever discrepancies this table shows and detracts from the value of the statement

Component societies are those societies which compose the state association A component society may include one county or more

[1] The state of Maryland has 23 counties and the city of Baltimore, Missouri has 114 counties and the city of St Louis

[2] These state associations are divided into district societies and these are listed in the table as component societies Some of these districts are smaller and some larger than the county, the county lines being ignored

[3] Provision is made for the physicians in each of these counties to join the component society in an adjoining county

[4] Virginia has recently adopted the plan of organization and is now establishing component county medical societies

MEMBERSHIP

The membership of the various constituent state associations, which constitutes the membership of the Association according to the records in the Secretary's office, May 1, 1916, is shown in the following table

FELLOWSHIP

The Fellowship of the American Medical Association on May 1, 1915, was 42,366 During the past year, 441 Fellows have died, 1,540 have resigned, 713 have been dropped as not eligible, 658 have been dropped for nonpayment of dues and 17 have been removed from the rolls on account of being reported "not found," making a total of 3,369 names to be deducted from the Fellowship roll There have been added 4,184 names to the Fellowship roll, of which 3,293 were transferred from the subscription list The Fellowship of the American Medical Association on May 1, 1916, was 43,181, a net increase for the year of 815

This gain in the number of Fellows is due largely, as in previous years, to circularizing subscribers to The Journal who were eligible, urging them to become Fellows

It becomes necessary to report that the Wyoming State Medical Society is *no longer active* No meeting of this constituent state association has been reported for the past three years and a number of Fellows who hold their Fellowship through membership in other constituent state associations and who have moved to Wyoming, write that they have not been able to obtain membership in the constituent association of that state A number of letters addressed to the secretary of this constituent association have *not* been answered

This state of affairs in the organization in Wyoming prompts the suggestion that the House of Delegates refer to the Judicial Council the question of whether or not a more compact organization than that at present defined in Art IV of the Constitution is advisable, and that the Judicial Council, if it determines a closer affiliation is wise, be instructed to take up the question with the constituent associations It is suggested, further, that the status of the Wyoming State Medical Society be referred to the Judicial Council with power, at the discretion of this Council, to revive the present organization or to arrange for a new organization of the profession in Wyoming to become the constituent association of the American Medical Association from that state.

Other matters in which the office of the Secretary of the Association has been concerned are reported to the House of Delegates from other sources

Respectfully submitted

Alexander R Craig,
Secretary

Report of the Board of Trustees

Dr W T Councilman, *Chairman, read the following report* which was referred to the Reference Committee on Reports of Officers

To the Members of the House of Delegates of the American Medical Association

During the past year the many activities of the Association have been followed with the usual diligence and with good results Full reports of all these you will hear through the chairmen of the various councils Considering the work of the Association as a whole, what it has accomplished in the past and the promise of the future, one is filled with a sense of pride in being a member of the body This work, while of benefit to the medical profession, extends much wider than this and benefits the nation It is only by means of the organization of the profession, so that its combined force is at the back of these reforms, that this work is possible. The reforms that have been brought about—notably that of medical education—have come slowly, thus producing no violent disturbances The manner of procedure has been to acquire full and accurate information of the subjects in hand, to give out this information, and with this as a basis to proceed. By the reports of chairmen the members are kept fully informed as to details as the work progresses. These reports form valuable contributions to knowledge on the subjects considered. In any review of the progress of education in this country the reports of the Council on Medical Education and the various subsidiary papers and reports proceeding from this must be considered. The same is true of the work of the other councils, particularly that on Health and Public Instruction and that of the Judicial Council. The reports of the chairman of the latter are valuable studies of the relation of the profession to the social state. This relation, which must become ever more important with the advance in social organization, has been fully recognized by your trustees who this year have granted a considerable sum of money which will be expended mainly in acquiring information.

We are entering on a period of great changes in social organization, a period which will necessitate a far closer organization of the people in all forms of activity, and this particularly calls for united strength in opposing disease. It is true we have not so strongly felt the necessity for this as have other nations, but the time has come when we can no longer resist the social movement, and it is better that we should initiate the necessary changes than have them forced on us. On such information laws regulating social medicine which will be just both to the medical profession and to the public, whom it serves, must be based. All of our councils have worked in perfect harmony with other bodies, often outside of the profession, which have had the common good in mind.

The great agent by which all this has been accomplished is our journal. It has furnished the material means, it is the bond of union. Not only this but medical men cannot afford to be ignorant of the information it conveys. The careful reading of THE JOURNAL will keep a man fully informed of the advance in medical knowledge and give him the stimulus which comes from the relation of research. THE JOURNAL is today the most valuable medical journal in the world and a profession which it fully represents must be on a high plane. Throughout the entire field of medicine it has been a leader and not a follower. No one can have a prouder monument than this journal will give to the man who has for so many years directed it and under whose fostering care and high ideals it has become what it now is. The Association, as the need for them arose, has also undertaken the publication of journals devoted to more special branches of medicine. These also have been successful and fulfil a useful purpose.

In considering the work of the Association, may we not say that it has accomplished a still higher task, that of uniting the medical profession? There has never been a time when it has been so free from faction. And the great idea on which this unity is based is that of service. No ignoble aim could have accomplished it, and the ideal of service is evident in all the activities of the medical profession as represented by this Association.

PUBLICATIONS

THE JOURNAL

The weekly average of the issue of THE JOURNAL during 1915 was 67,390 which was distributed to 64,859 Fellows and subscribers. The difference between the issue and the subscriptions is accounted for by copies to exchanges, libraries, advertisers and the reserve copies kept on hand for future orders. The receipts for advertising during the year were $204,837.20—an increase over the previous year notwithstanding the fact that the character of the advertisements is carefully scrutinized and all those are rejected which for sufficient reasons seem not to conform to our high standard.

The percentage of physicians in the United States who are receiving THE JOURNAL is 45.3. At first thought it would appear that this was a comparatively small percentage, considering the value of THE JOURNAL and the position it occupies. However, on several occasions pains have been taken to ascertain the number of physicians who read THE JOURNAL and from the information gathered we can conservatively state that at least 75 per cent. of the physicians of the United States have access to it. As a matter of fact THE JOURNAL reaches a larger percentage of its clientele and covers its particular field more thoroughly than does any other journal issued for any other class, profession, trade or specialty.

THE ARCHIVES

THE ARCHIVES OF INTERNAL MEDICINE now has on its mailing list 2,053 names, including foreign exchanges, libraries, etc., which shows a net loss as compared with 1914 of twenty-four. This is more than covered, however, by the foreign loss due to war conditions. There were 958 names added to the mailing list during 1915, and 982 removed. The total number of copies printed during the year, 28,713, was 1,119 less than those printed the previous year.

AMERICAN JOURNAL OF DISEASES OF CHILDREN

On the first of January there were 2,198 names on the mailing list, indicating a loss of fifty-four names, which also is due to the foreign loss. There are 357 physicians who are taking this journal as Fellows of the Association, substituting it for THE JOURNAL, whereas in 1914 there were 263. The total number printed during 1915 was 29,757, or 1,911 more copies than in 1914.

THE AMERICAN MEDICAL DIRECTORY

The American Medical Directory, just off the press, merits more than a passing notice. It is the fifth edition, and as each preceding edition has been improved over its predecessor, so also this one is better than its predecessors. There is a better arrangement of the preliminary matter and greater accuracy in the personal information. Prior to the publication of this edition, a special effort was made to verify the credentials of physicians who graduated abroad and as a result the information about such physicians is now dependable. By the use of symbols and abbreviations, a large amount of information is included in small space. The European war, however, prevented the use of the specially imported thin paper used in the previous edition. This and the addition of several thousand names have caused an increase in the size of the directory.

We are confident that those who have received the book and have examined it carefully regard it as a credit to the Association, not only because of the character and accuracy of its contents, but also from the mechanical point of view. As with previous editions, all the work on the directory except the binding was done in the Association's own building.

While no edition of the directory has entirely paid for its publication, the fifth edition gives promise of being more nearly self-supporting than the preceding volumes, but it is impossible at the present time to make a financial statement regarding this edition of the directory.

ORGANIZATION WORK

The Association has continued its endeavors to increase the membership of the organization. This work is undertaken only after the assistance of the constituent state association has been secured. With the cooperation of the officers of the state organizations and the officers and members of the component societies, men in the employ of the Association have been sent into certain of the states to solicit subscriptions to THE JOURNAL and Fellowship in the Association, as well as to present the advantages of membership in the organization to physicians of the localities visited. As suggested above, this work has not been undertaken except where it has been agreeable to the officers of the constituent state associations, and when these officers have agreed both to cooperate by assisting the organizers, and to pay a small fee to these organizers for each member who qualifies and whose application is obtained through the efforts of the organizer. The American Medical Association pays the organizers a weekly expense allowance and a salary for the organization work they perform, as well as a percentage on "new business" obtained for the Association. The state associations pay for each new member one half or less than one half of the per capita assessment for the first year received from each new member while this work costs the American Medical Association practically the first year's return from the "new business" obtained. Where the local officers have counseled with and directed the organizers, the work has been mutually advantageous, but the success of the endeavor is conditioned on such cooperation

Cooperative Medical Advertising Bureau

The Cooperative Medical Advertising Bureau is doing a good work All of the journals owned by the state associations, with the exception of the Illinois journal, are now in this bureau The bureau, in addition to securing advertisements for the state publications, which during 1915 amounted to $16,830 65, also collects data of all sorts relating to advertisements, giving important information There was a net loss to the Association through the bureau of $708 30, which is probably more than offset by the indirect gain, and there is a reasonable prospect that the bureau will soon be self-supporting

Propaganda Department

The Propaganda Department continues its work with regard to medical frauds The layman's interest in the work is shown by the increasing number of inquiries concerning advertised substances which are received In 1915 1 612 such inquiries, as compared with 525 such letters in 1910 Newspapers and magazines also continue to call almost daily for information regarding "patent medicines," and the vigilance committee of the Associated Advertising Clubs of the World is taking advantage of the data this department is able to furnish it People who advertise are recognizing the fact that for their own protection the advertisements cannot be fraudulent A paper which habitually fills its columns with glaring announcements of fraudulent articles is not so good a medium for legitimate and honest advertising There is a growing interest in the subject among educational institutions State and municipal boards of health civic organizations, women's clubs, etc, continue to call on the department for information

Council on Pharmacy and Chemistry

The Council on Pharmacy and Chemistry has continued its work, and has published reports on practically all the widely advertised proprietary mixtures It is confronted with many difficulties, not the least of which are the questions of radium and the mixed vaccines Only time can establish the true place of these substances as remedial agents The little book on "Useful Drugs," which the Council has published, is fulfilling an important purpose and will tend to eliminate the use of the multitude of inert substances which still have a place in pharmacopeias The committee of the Council on Therapeutic Research has secured the investigation of a number of problems regarding the therapeutic value of many widely used but insufficiently understood drugs The problems selected for investigation deal with the determination of the clinical action of drugs, and in this way many therapeutic points are being definitely decided

The work of the Council has reached a stage when little more can be done by the efforts of the Association as a whole, the continuance of the work and the final accomplishment depends on the individual members There is much evidence that the individual members of the profession are prescribing and using the very substances which as a combined body they condemn, and many of the journals which they support advertise and recommend these substances There are many reasons for this, and none of them creditable The first is the financial power of the interests of the manufacturers, and its influence on medical journals This is a constant positive pressure, that opposing is inconstant and negative The leading lay publications of the country show cleaner advertising pages than many of the medical journals The second is due to a credulous order of mind not capable of distinguishing evidence from mere statement, and rendering its possessor an easy victim to the lures of the promoter The third is indolence, which finds it easier in treating patients to follow advice given in advertisements of proprietary drugs than to undertake the arduous task of ascertaining the condition of the patient and to base thereon a sound scientific, therapeutic treatment. No great progress can be made until the medical profession awakes to the fact that the remedy against fraudulent proprietary medicines lies in its own hands—until the profession resolves to believe rather the evidence which is presented by the scientific investigation of the substances than the biased statements of the agents, whether presented by word of mouth or by advertisements

Memorial to Congress Regarding Proprietary Medicines

In accordance with your action on the subject of a memorial to Congress regarding "patent" and proprietary medicines the Trustees appointed a committee consisting of President Rodman, Dr Alexander Marcy, Dr George H Simmons, Dr Hiram Woods and Dr Councilman to present the matter to the President Owing to the death of Dr Rodman and the illness of Dr Woods, only three members of the committee could serve A memorial, which has appeared in The Journal, was presented[1] The president seemed interested, and there is prospect that the request for a government investigation will be granted Such an investigation will lead to a wider knowledge of the matter and possibly some remedial legislation But even this will not avail unless the individual members of the profession will act on the *information obtained* Great assistance in procuring such a commission can be rendered if the members of the House will bring the matter to the attention of their congressmen and urge the measure

Financial

The report of the finances of the Association continues to be favorable, although this year there is a slight loss instead of a gain This is due solely to the expenses connected with the lawsuits A stage has been reached in the contest against "patent medicines" when all the resources and methods of the law backed by almost unlimited means will be invoked by threatened interests These suits must be met and defended by the Association, and if necessary the other welfare work must be temporarily curtailed Without the unusual expenses mentioned, the year would have shown a handsome surplus

Deaths

It is with a feeling of personal sorrow as well as of the great loss which the Association has met that the trustees pay tribute to the character and work of those leaders in the conduct of the affairs of the Association who have died in the past year Dr William L Rodman, the President of the Association and at one time a member of the Board of Trustees, has done work of importance for the medical profession of the country, the last being an endeavor looking toward the formation of a national board of medical examiners He met with the Board of Trustees at the principal meetings, and his counsel, which was practical and conservative, was of great value The Association in his death has experienced a loss not easily repaired Dr Frank J Lutz will be remembered by his colleagues as a sincere, able man, kindly in his nature, with a keen sense of humor, conversant with the best literature of the past, always willing to do the work which fell to him He entered freely into the discussions of the board and his opinions were highly valued The older members of the board will well remember Dr Wisner R Townsend, who for several years was its most efficient secretary, an active energetic man, who attended well to his duties, bringing to bear on the work an orderly, active and capable intelligence With this there is also to each member of the board a sense of personal loss The trustees also wish to pay a tribute to Dr Henry B Favill, whose death came just at the time when he was capable of the greatest service to the profession To the study of the problems of social medicine he brought to bear knowledge derived from close study of the problems, a warm human sympathy, and a rare intelligence It is sad that he could not live to see the fruition of his work

Respectfully submitted,

W T Councilman, Chairman
M L Harris, Secretary
Thomas McDavitt
W W Grant
Oscar Dowling
Philip Marvel
Philip Mills Jones
W T Sarles

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[1] U S Commission to Investigate the Proprietary Medicine Business, The Journal A M A, March 25, 1916, p 974

Addenda to Trustees' Report

SUBSCRIPTION DEPARTMENT

The regular weekly issue of The Journal of the American Medical Association, from Jan 1, 1915, to Dec 31, 1915, inclusive, fifty-two issues, was as follows

January 2	71 840	July 3	63 786
January 9	64 681	July 10	63 792
January 16	64 604	July 17	63 583
January 23	64 746	July 24	63 965
January 30	64 620	July 31	64,058
	——330 491		——319 184
February 6	65,311	August 7	63 891
February 13	64 724	August 14	63 834
February 20	62 922	August 21	65 593
February 27	62 704	August 28	64,011
	——255 661		——257,329
March 6	63 674	September 4	64,283
March 13	63 811	September 11	73 303
March 20	63 473	September 18	72 704
March 27	63 379	September 25	72 607
	——254 337		——282 897
April 3	63 926	October 2	74 150
April 10	64 080	October 9	75 191
April 17	63 694	October 16	76 043
April 24	63 550	October 23	74 921
		October 30	71 995
	——255 250		——372 300
May 1	63 412	November 6	65 166
May 8	63 776	November 13	65 092
May 15	71 770	November 20	76 565
May 22	64 119	November 27	80 754
May 29	63 397		
	——326 474		——287 577
June 5	63 807	December 4	75 850
June 12	63,283	December 11	81 105
June 19	63 826	December 18	75 600
June 26	63 485	December 25	75 873
	——254 401		——308 428
Total			3 504 329
Weekly average			67 390

PERCENTAGE OF PHYSICIANS RECEIVING THE JOURNAL

This table gives the number of physicians (based on the fourth edition of the American Medical Directory) in the United States the number receiving The Journal and the approximate percentage in each state. Copies to physicians in the United States Army United States Navy Public Health Service, etc. omitted

State	Number Receiving Journal	Number of Physicians in State—5th Ed. A M Dir	Approximate Per Cent 5th Ed A M Dir
Alabama	638	2 569	25
Arizona	199	307	64
Arkansas	608	2 637	23
California	2 960	5 687	52
Colorado	760	1 733	43
Connecticut	771	1 678	46
Delaware	105	261	40
District of Columbia	598	1 482	40
Florida	446	1 321	41
Georgia	1 037	3 421	30
Idaho	220	439	50
Illinois	5 613	10 648	52
Indiana	1 697	4 872	34
Iowa	1 791	3 751	47
Kansas	1 100	2 683	41
Kentucky	1 337	3 584	37
Louisiana	722	2 060	30
Maine	472	1,205	39
Maryland	1 222	2 292	53
Massachusetts	3 118	5 869	53
Michigan	2 221	4 360	51
Minnesota	1 530	2 447	62
Mississippi	446	2 048	21
Missouri	2 201	6 399	34
Montana	325	636	50
Nebraska	873	1 911	43
Nevada	90	154	58
New Hampshire	420	690	60
New Jersey	1 413	3,239	43
New Mexico	206	430	48
New York	6 892	15 670	43
North Carolina	737	2 102	35
North Dakota	395	586	67
Ohio	3,288	8 045	40
Oklahoma	1 101	2 634	41
Oregon	566	1 187	47
Pennsylvania	5 385	11 502	46
Rhode Island	371	772	48
South Carolina	511	1 399	36
South Dakota	420	676	63
Tennessee	1 096	3 457	31
Texas	2 182	6 240	31
Utah	249	465	53
Vermont	250	668	37
Virginia	961	2 547	37
Washington	815	1 695	48
West Virginia	826	1 729	47
Wisconsin	1 514	2 803	56
Wyoming	123	251	49

The following table shows the number of Fellows and Subscribers for each year commencing with 1900

Year	Fellows	Subscribers
Jan 1, 1900	8 445	4 633
Jan 1 1901	9 841	8 339
Jan 1 1902	11 107	10 795
Jan 1, 1903	12,553	12 378
Jan 1, 1904	13 899	14 674
Jan 1, 1905	17 570	15 698
Jan 1, 1906	20 826	17,669
Jan 1 1907	26,255	20 166
Jan 1, 1908	29 382	20 880
Jan 1, 1909	31,999	18 983
Jan 1, 1910	33 032	19 832
Jan 1, 1911	33 540	20 504
Jan 1, 1912	33 250	21,620
Jan 1 1913	37 493	19 863
Jan 1, 1914	41 203	19,751
Jan 1 1915	42 956	20 430
Jan 1, 1916	43,927	22,919

TREASURER'S REPORT

Report of the Treasurer of the American Medical Association for the year ending Dec. 31, 1915

1915			
Jan 2—	Invested Reserve	$118 832 50	
	Certificate of Deposit	20 000 00	
	Checking Account	7 301 62	
			$146 134 12
	Receipts		
	Interest on Invested Reserve	$ 5 175 00	
	Interest on Certificate of Deposit	881 66	
	Interest on Bank Balance	125 13	
	Interest on Uninvested Reserve	52 96	
			$ 6 234 75
			$152,368 87
	Summary of Balance		
Dec 31—	Invested Reserve	$118 832 50	
	Uninvested Reserve	5 227 96	
	Certificate of Deposit	20 000 00	
	Checking Account	8 308 41	
			$152 368 87
	Davis Memorial Fund		
1915			
Jan 2—	Balance	$ 3 241 82	
	Interest	97 97	
Dec 31—	Balance		$ 3 339 79

Wm Allen Pusey Treasurer

AUDITOR'S REPORT

Marwick Mitchell Peat & Co Chartered Accountants
105 South La Salle Street

Chicago Ill. Jan 24 1916

To the Board of Trustees of the
American Medical Association Chicago Ill

Dear Sirs

In accordance with your instructions we have audited the accounts of the American Medical Association for the year ended Dec. 31 1915 and now submit our report thereon together with the following statements

Exhibits
- A Balance Sheet as at Dec. 31 1915
- B ' Income and Profit and Loss Account for the year ended Dec 31 1915

Schedules
- 1 Journal Expenses for the year ended Dec 31 1915
- 2 ' Particulars of Provision for Depreciation during the year ended Dec. 31 1915

The balance sheet as submitted herewith, Exhibit A ' in our opinion correctly reflects the financial position of the Association as at Dec 31 1915 subject to provision for accrued interest, taxes and Journal subscriptions paid in advance less subscriptions and memberships due and unpaid.

The following is a condensed comparative balance sheet as at Dec. 31 1915 and 1914

Assets	December 31 1915	December 31 1914	Increase	Decrease
Property and Equipment.	$317 685 05	$328 656 60		$10 971 55
Investments	138 832 50	138 832 50		
Current and Working Assets	106 148 43	75 849 62	30 298 81	
Prepaid Accounts and Reserves	10,233 08	4 794 56	5 438 52	
Total Assets	$572 899 06	$548 133 28	$35 737 33	$10,971 55
Liabilities	154 871 52	123 287 59	31 583 93	
Surplus	$418 027 54	$424 845 69	$ 4 153 40	$10,971 55

Summary

Assets	
Increases	$35 737 33
Decreases	10 971 55
Net Increase	$24 765 78
Liabilities	
Increase	$31 583 93
Surplus Decrease	$ 6 818 15

The net loss for the year ended Dec. 31 1915 amounted to $2 489 20 particulars of which are shown in Exhibit B

The securities representing the investments of the Association were produced for our inspection and found in order

We verified the cash on hand by actual count and the cash in bank by certificate obtained from the bankers, which we duly reconciled with the cash records

The following is a summary of the cash on hand and in bank, exclusive of the insurance cash fund, which was verified by certificate obtained from the depository

Cash on Hand	$ 1,346 85
Cash Fund	50 00
Continental and Commercial National Bank	9,343 44
First Trust and Savings Bank	8,306 41
Total	$19,048 70

EXHIBIT "A"

Balance Sheet as at Dec 31, 1915

Assets

Property and Equipment at Cost, Less Depreciation			
Real Estate and Buildings			$249,498 79
Machinery			43,285 05
Type and Metals			8,117 42
Furniture and Fixtures			13,585 49
Chemical Laboratory			1,612 20
Library			1,585 50
Total Property and Equipment, less Depreciation			$317,685 05
Investments			
Invested Reserve		$118,832 50	
Certificates of Deposit		20,000 00	
			$138,832 50
Current and Working Assets			
Inventory of Materials Supplies and Work in Progress		$37,568 82	
Accounts Receivable			
Advertising	$17,254 09		
Reprints	1 538 39		
Miscellaneous	2,054 73		
Cooperative Med Advertising Bureau	2,301 87	$23,149 08	
Notes Receivable		191 25	
Directory, 5th Edition (Labor and Material)		26,190 58	
Cash in Bank and on Hand		18,998 70	
Office Fund		50 00	
Total Current and Working Assets			$106,148 43
Liability Insurance Fund in Bank			4,776 22
Uninvested Reserve			5,227 96
Prepaid Insurance			228 90
Total			$572,899 06

Liabilities

Accounts Payable		
Sundry		$ 416 32
General		19,359 92
Cooperative Medical Advertising Bureau		1,836 04
		$ 21,612 28
Advance Payments on Publications		4,422 56
Association Reserve Fund		124,060 46
Liability Insurance Reserve		4,776 22
Surplus		
As at Dec 31, 1914	$424,845 69	
Less Adjustments	4,328 95	
	$420,516 74	
Deduct Loss for year ended Dec 31, 1915	2 489 20	$418,027 54
Total		$572,899 06

EXHIBIT "B"

Income and Profit and Loss Account for the Year Ended Dec 31, 1915

JOURNAL		
Income		
Fellowship Dues		$ 40,681 42
Subscriptions		254,689 41
Advertising		204,837 20
Jobbing		2,598 75
Books		4,906 50
Reprints		2,873 16
Buttons		97 47
Miscellaneous Sales		4,627 40
Interest		1,298 12
Children's Journal		453 92
Total Income		$517,063 35
Expenses		
As per Schedule "1"	$417,577 48	
Provision for Depreciation—Schedule "2"	16,598 41	
Loss on Bad Debts	2 105 88	
Total Expenses		$436 281 77
Net Income, Journal		$ 80,781 58
ASSOCIATION		
Expenses		
Propaganda	$ 9,112 70	
Association	28,957 81	
Health and Public Instruction	13,643 75	
Pharmacy Chemistry and Chemical Laboratory	14,208 27	
Medical Education	8,743 28	
Organization	8,395 72	
Therapeutic Research	1,663 00	
Session 1915	1,793 04	
	$ 86 517 57	

SCHEDULE "1"

Journal Expenses for the Year Ended Dec 31, 1915

Wages and Salaries	$147,949 10
Editorials, News and Reporting	11,427 85
Paper—Journal Stock	115,797 02
Paper—Miscellaneous	3,029 91
Electrotypes	5,278 88
Binding	165 25
Ink	4,012 77
Postage—First Class	18 334 93
Postage—Second Class	27,621 02
Journal Commissions	8,821 82
Collection Commissions	3,473 60
Discounts	4,076 66
Express and Cartage	2,471 19
Exchange	1,706 91
Office Supplies	704 97
Telephone and Telegraph	778.21
Office Jobbing	3,532 11
Miscellaneous	6 753 88
Power	2,636 45
Light	895 84
Fuel	2 116 47
Factory Supplies	4,447 71
Insurance and Taxes	5 366 21
Legal	28,837 63
Repairs and Renewals—Machinery	3,335 76
Building—Maintenance	1,831 71
Archives	465 13
Cooperative Medical Advertising Bureau	708 30
Liability Insurance	1,000 00
Total	$417,577 48

SCHEDULE "2"

Particulars of Provision for Depreciation During the Year Ended Dec 31, 1915

Property and Equipment	Rate	Amount
Building "A"—Old	2 5 per cent	$ 408 28
Building "B"—New	2 5 per cent	4,512 10
Machinery	15 per cent	7,638 65
Furniture and Fixtures	15 per cent.	1,767 54
Factory Fixtures	10 per cent	396 60
Type	15 per cent.	799 82
Metal	20 per cent	896.28
Laboratory Equipment	10 per cent	179 14
Total Depreciation		$16,598 41

We verified the cash disbursements with proper vouchers on file and an exhaustive test of the various sources of income was made

We found the accounting records to have been maintained in the usual good order

In conclusion, we beg to express our appreciation of the courtesies extended to us during the course of our examination and to state that we shall be pleased to furnish any additional information that you may desire

Yours truly,
Marwick, Mitchell, Peat & Co,
Chartered Accountants

Report of the Judicial Council

Dr Alexander Lambert, New York, Chairman, read the report of the Judicial Council which was referred to the Reference Committee on Amendments to the Constitution and By-Laws

The report follows

To the Members of the House of Delegates of the American Medical Association

In presenting its report to the House of Delegates, the Judicial Council desires to call attention to certain amendments to the Constitution and By-Laws which, in its opinion, are advisable both to expedite the increasing volume of business which is necessary to consider in the House of Delegates and to afford greater opportunity to the members of the House of Delegates to take part in the Scientific Assembly of the Association, and also further amendments to separate more clearly the functions of certain officers of the Association

Amendments to Constitution and By-Laws

As the volume of business coming before the House of Delegates has grown, there has been a growing realization from year to year that the mass of business was having an undesirable effect in that it crowded, often into hurried discussion many important matters The first day of the meeting of the House of Delegates is taken up in receiving reports and in other business, referring this to the various committees, and then, in order that the matters brought before it may be properly digested, considered in committee and brought back to the house for action the house adjourns until the following day On the following day, in the morning the General Meeting of the Association takes place, the house not assembling until the afternoon when, at the same time, the sections of the Scientific Assembly begin The real business of the House of Delegates, therefore, is not finished before the beginning of the Scientific Assembly and really begins coincident with it This practically prevents any participation of the delegates in the Scientific Assembly and deprives them of one of the main objects for which they would wish to come to the annual session of the American Medical Association In reality it places a burden on them, at the same time depriving them of certain privileges which they should have the opportunity to enjoy

There has been a growing feeling among the delegates that this situation should be remedied and that it would best be remedied by pushing forward the meeting of the House of Delegates, bringing the first day on the Saturday before the general meeting of the American Medical Association This has come up for decision at various times and been voted down In considering the matter it seems to the Judicial Council that it were wiser to push on to a later day the general meetings of the Association and the first meeting of the Scientific Assembly, that is, that the House of Delegates should continue to meet on Monday and Tuesday taking two whole days to complete its work, and the Scientific Assembly, opening with the general meeting of the Association, should begin on Wednesday and continue through Friday of the week breaking up Friday evening instead of Thursday evening as is now done Those desiring to come to the Scientific Assembly alone would be present the usual three days, from Wednesday until Friday, instead of from Tuesday until Thursday and the House of Delegates would be present from Monday until Friday This seems more desirable than that the delegates should be forced to come on Saturday wait over Sunday again meet on Monday, and stay until Thursday The method here recommended saves twenty-four hours of absence from home duties and does not increase it by twenty-four hours as the former suggested amendments to the By-Laws did To bring this change about, the following amendments to the By-Laws are necessary and are therefore recommended by the Council

That in Chapter III, Section 1 the word "day" be stricken out and the words "two days" be substituted, so that the section which now reads 'Regular Sessions—The House of Delegates shall meet annually on the day preceding the opening of, and at the same place as, the Scientific Assembly of the Association" shall read

'The House of Delegates shall meet annually on the two days preceding the opening of and at the same place as, the Scientific Assembly of the Association"

This would assign the general meeting of the Association to Wednesday and would throw the election of the officers of the Association in the House of Delegates to Friday afternoon for Chapter IV, Section 3 of the By-Laws reads, The election of officers shall be the first order of business of the House of Delegates after the reading of the minutes on the afternoon of the third day of the Scientific Assembly" There is nothing at present in the Constitution and By-Laws which fixes the first day of the Scientific Assembly on Tuesday The Constitution and By-Laws wisely has given to the Board of Trustees full power to control all arrangements for the annual sessions of the Association, as in the By-Laws Chapter VI Section 2 All elections and time of the meetings are designated in the By-Laws as being required to be held on the first, second or third days of the meetings of the Scientific Assembly The following further amendment to the By-Laws is however, necessary

In Chapter II, Section 2 the limit of time for introduction of new business into the House of Delegates is designated as follows "No new business shall be introduced into the House of Delegates after the second day of the Scientific Assembly (third day of the House of Delegates), unless with unanimous consent," etc It is therefore recommended that this By-Law shall be changed to read

"No new business shall be introduced in the House of Delegates after the second day of the annual session of the House of Delegates unless by unanimous consent, and such new business, so presented, whether in the form of a motion, resolution or memorial, shall require a two-thirds affirmative vote for adoption, provided, however, that unless otherwise provided in these By-Laws, new business referred to the House of Delegates by the officers of the sections or by formal action of the sections themselves may be presented to the House of Delegates any time preceding the meeting at which the election of officers takes place"

ELECTION OF A SPEAKER

At various times in the past few years there has come up the question of the election of a speaker for the House of Delegates and with it necessarily the election of a speaker pro tem as a possible substitute In the second year of the existence of the Judicial Council this matter was referred to it for decision The Council was unwilling at that time to decide the question and reported it back to the House of Delegates for its own decision, the house at that time deciding against it. Since then each year has emphasized the desirability, if not the necessity, of having a presiding officer who shall be familiar with the transaction of the business of the House of Delegates and be familiar with the business that recurs year after year and one who may also be familiar with the best methods of expediting business in the house There has been a growing conviction among many delegates that a great deal of time was unconsciously and unavoidably wasted in the House of Delegates in the transaction of its business The Judicial Council, therefore recommends to the House of Delegates that it take up the question of the election of a speaker of the house This requires a change of the Constitution, if the speaker of the House of Delegates shall be put under the general officers of the Association, and to Section 1, Article 9 of the Constitution there should be added the words "a Chairman of the House of Delegates," so that the section shall read

"The general officers of this Association shall be a President, four Vice Presidents a Secretary, a Treasurer, and a Chairman of the House of Delegates"

At the San Francisco session an amendment to this effect was submitted, so it is within the power of the House of Delegates to act on this matter at this session The Council would also recommend that a new section be inserted under Chapter IV of the By-Laws to read as follows

"Section 2 The House of Delegates shall annually elect a Chairman and a Vice Chairman, these officers to serve for one year or until their successors are elected and installed These officers must be Fellows of the American Medical Association and must have been Fellows of this Association for at least the two years immediately preceding their election to this office They need not, however, be members of the House of Delegates, but they shall possess all powers of the presiding officer of this parliamentary body These elections shall follow the election of the treasurer of the Association"

If this is adopted, the Council also recommends the renumbering of the present sections under Chapter IV

One objection which was formerly brought against the election of a speaker of the House of Delegates was that the speaker would necessarily be elected by the house which preceded the one over which he was to preside. This objection is more theoretical than practical for each House of Delegates is now presided over by two presidents neither of whom was elected by the house over which he presides Moreover, at each session of the House of Delegates a still more incongruous situation is in vogue. One president nominates all the reference committees of the house to do the work of the house, nominating whom he chooses and rightly so so far as he is concerned, but the president through whose term of service all the active business must be done, has no voice in naming the reference committees with which he must work Section V, Chapter 4 now reads "The General Officers of the

Association, except the President, shall assume their duties at the close of the last meeting of the annual session at which they are elected," and Section 6, "The President shall be installed at the general meeting of the annual session following that at which he was elected"

APPELLATE JURISDICTION OF JUDICIAL COUNCIL

At the Atlantic City session of 1914 the Judicial Council made the recommendation that it be given certain appellate jurisdiction as follows "In all cases which arise between a constituent association and one of its component county societies, between component county societies of the same constituent state association, between a member of a constituent state association and the component society to which said member belongs, and between members of different component societies of the same constituent state association, the Judicial Council of the American Medical Association shall have appellate jurisdiction" This was laid on the table and referred back to the various constituent state associations for consideration and action before it should be finally passed on by the House of Delegates of the American Medical Association It was not brought up for action in San Francisco in 1915

This recommendation as it stands at present is, in the opinion of the Judicial Council, too broad because it refers to all cases, both of law and procedure, and also to all cases of fact In the opinion of the Judicial Council it should be limited to cases of law and procedure and the question of the settlement of facts should not be brought before it This reopening of questions of fact before the Judicial Council is, in its opinion, very undesirable, because it means the opening of the entire details of the cases brought before it and the going over and the reiteration of evidence already brought out before the councils or the censors of the constituent state associations or the county societies composing them Such questions of fact are best considered and decided in the places where differences of opinion concerning them have arisen They are best decided where knowledge of the credibility of the witnesses can be best appreciated Questions of fact should be considered and decided before being brought to the Judicial Council The questions, however, that come up as to whether or not an aggrieved member has obtained the justice which he sought, or whether or not a just decision has been reached in the matter of law or procedure between societies and individuals may well be a question which can be appealed from the decision of the first courts which decided it

The Judicial Council does not bring this before the House of Delegates with any desire to obtain new power or more power than it now has The Council believes that the House of Delegates intends and desires that the Judicial Council shall be a dignified court to which disputes may be referred for decision, but as at present constituted, the Judicial Council has only original jurisdiction within clearly limited fields There is no question that at present it has only the power and half the functions which a final court of decision should possess, that is, there is no mechanism by which appeals may come up from the constituent state associations to it It has already been forced on certain occasions to ask as a favor the reconsideration of cases by state associations which, in an appeal, would naturally have come to the Council if it had had appellate powers Thus it can be readily appreciated by the House of Delegates that responsibilities are demanded of the Judicial Council and thrown upon it without adequate authority to deal with these responsibilities The position of having responsibility without authority has been forced upon it Such a situation places the Judicial Council in a false and undignified position, which the Council believes the House of Delegates should remedy

ELIGIBILITY OF PRESIDENT

The question of whether or not a member of the Board of Trustees is eligible under the existing Constitution and By-Laws to election to the office of president or vice president during his term of office as trustee came up at the meeting in San Francisco. This question created such a wide difference of opinion that it was very evident it was not clearly stated in the Constitution and By-Laws whether or not a trustee was thus eligible. A question such as this cannot recur without detriment to the harmony and welfare of the American Medical Association The Judicial Council believes, therefore that it should be definitely decided and that positive statements thereon should be inserted in the Constitution and By-Laws and should be brought before the House of Delegates for its decision

The greatest honor that the Association can pay to any member is to elect him president, and during the tenure of his office a president should be permitted to give his entire time to the honorable and honorary duties of his office in presiding at general meetings, in nominating for the consideration of the House of Delegates such candidates for election on the councils and various bodies that are to be confirmed by election of the House of Delegates During the annual session of the Association he should be relieved of the hard work and often wearisome duties of presiding in the House of Delegates and should be able to devote his time to the social and scientific side of the meetings Between the annual meetings of the Association it would seem wise that it should be part of the duties of the president to become familiar with all the varied activities of the American Medical Association The Board of Trustees always extends an invitation to the president to be present at the meetings of the board By attending these meetings the president can familiarize himself with the work the Association is doing

A place on the Board of Trustees is a very honorable position It is particularly honorable because with it goes the responsibility of the care and management of all the activities of the Association The Constitution wisely provides for the election of trustees for a term of three years A term of some years is necessary to obtain the best services from any trustee It requires continuous tenure of office to give the best service to the Association and often for these reasons a trustee is continued in office for several terms After the House of Delegates has bestowed its confidence upon any individual by honoring him with the position of trustee for a definite term of years, and he has accepted the same, it would seem wise that he should fulfil the expectations of serving out his term of years with which the House of Delegates has honored him The Judicial Council would recommend that Article X Section 2, of the Constitution be amended by adding to the section, as it now reads, the following

"No trustee shall be eligible to any other elective office the term of which runs concurrently with the term for which the said trustee has been elected"

It would seem wiser to reiterate in the By-Laws by adding to Section 2, Chapter IV, the following

"No member of the House of Delegates shall be eligible to the office of president or vice-president, nor shall a member of the Board of Trustees be eligible for election to any other elective office the term of which runs concurrently with the term for which the said trustee has been elected"

The Judicial Council calls the attention of the House of Delegates to the report of the Committee on Social Insurance of the Council on Health and Public Instruction This Committee on Social Insurance coordinates the consideration of this subject which has been given by both Councils

Respectfully submitted

Alexander Lambert, Chairman,
James E Moore,
Hubert Work,
A B Cooke,
Randolph Winslow,
Alexander R Craig, Secretary

Report of Council on Health and Public Instruction

Dr H M Bracken, Minnesota, temporary chairman, read the report of the Council on Health and Public Instruction which was referred to the Reference Committee on Legislation and Political Action

The report follows

To the Members of the House of Delegates of the American Medical Association

The Council on Health and Public Instruction has, during the past year, suffered the greatest loss that could possibly befall it The death of the chairman, Dr Henry B Favill, Feb 20, 1916, not only deprived the Council of its chairman and its chief inspiration, but also deprived the American Medical Association of one of its strongest most effective and valuable members and the medical profession of the country of one of its finest representatives It is impossible to express adequately the loss which we have sustained In order that a proper appreciation of the life, character and professional activities of Dr Favill may appear on the records of the Association the Council requests that a committee be appointed to draft suitable resolutions for adoption by the House of Delegates

The work of the Council during the past year has differed from that of previous years in that many of the plans which have been under consideration and development in the last five years have this year produced definite results, while the formulation of new plans and activities has been somewhat checked, for the time being, by reason of the necessarily limited appropriation made for the Council s work this year, and by the amount of time required on the part of all those officially connected with the Association to look after the details of the libel suit now pending in the courts

The Council is endeavoring to develop the program outlined in 1914 and reaffirmed in 1915 This program includes

1 A thorough investigation of present public health conditions in the United States with a view to securing more accurate information on all phases of the public health program than is now available.

2 Education of the public by every possible means in order that the people may understand the enormous advances in scientific medical knowledge during the last generation and the possibility of utilizing such knowledge in the prevention of disease the reduction of the death rate and the prolongation of human life

3 The crystallizing of such educated public sentiment in necessary public health laws regulations and ordinances which will render possible a conservation of human life, commensurate with our advancing knowledge, and which will render such laws more effective through an educated and enlightened public opinion

Investigation of Present Public Health Conditions

As stated in previous reports this subject naturally divides itself into four parts namely the investigation of federal health activities state health activities municipal health activities and voluntary public health activities carried on by independent organizations In two of these subdivisions, distinct progress has been made by the Council during the last year The other two while of equal importance, have not as yet been developed, for reasons which will be apparent

1 The study of federal public health activities and the inauguration of a survey of the work being done by the different departments of the federal government for public health are still under consideration A tentative plan has been formulated for carrying on this work which it is hoped can be developed during the next year

2 The survey of state public health activities made in 1914 by Dr Charles V Chapin, commissioner of health of Providence, R I, as a special representative of the Council, has been summarized in a comprehensive report by Dr Chapin, including a rating sheet of the forty-eight state health organizations and exhaustive tabulations of their various activities, appropriations expenditures, etc. This report submitted to the Council by Dr Chapin was ordered published A preliminary edition of 1 000 copies was issued in February and distributed shortly before the midwinter conference to members of state boards of health and officers of the Association The first edition was distributed largely for the purpose of securing suggestions and criticisms Communications on various phases of the report have been received from twenty-three states These have been referred to the members of the Council and to Dr Chapin for consideration and will be taken up in detail at the meeting of the Council to be held during the Detroit session It is probable that the Council will order a revised edition for general circulation

The survey of Dr Chapin and the publication of this report will it is hoped mark the beginning of as distinct a movement in the public health field as the first report and classification of medical colleges by the Council on Medical Education inaugurated in the educational field The situation is, in many ways, identical Neither the Council nor Dr Chapin as its representative has, or possibly could have, the slightest authority All that we can do is to secure the facts regarding the work being done in each state, and so far as possible tabulate and summarize these facts so as to arrive at some kind of average or standard which can be used for the purpose of grading the work in different states so as to institute a comparison that will be not only illuminating but also stimulating Prior to the publication of Dr Chapin's report, there was no possible way in which the public health work being done in different states could be compared and estimated It is now forty-seven years since Massachusetts in 1869 established the first state board of health Each state has followed its own ideas and inclinations in establishing and developing its state public health work. It is today impossible to determine, except in terms of individual opinion what is the ideal or desirable form of state public health organization, what such an organization should include how many men are required to conduct it, or what should be its cost For states like Nevada, Montana, Arizona and New Mexico to undertake to model their state public health organization on the same plan as that of New York and Pennsylvania is manifestly absurd It is impossible to say how many men an adequately organized state health department should have, how many of them should be full time men, what equipment such a department should have, what relation it should bear to local or county health administration, and how much it should cost the people of the state, either totally or on a per capita estimation It is also impossible to determine whether, for the amount that is being spent, the people of any state are getting value received for their money or how near they are coming to such a realization Dr Chapin's study of this entire field is the first effort that has been made to obtain a comprehensive view of the entire subject Necessarily limited as to time and funds, the survey and the report have already proved of the greatest value and interest to those interested in state public health work. This interest will increase with the publication of a larger revised edition of the report Through the rating sheet, which is the summing up of the entire report, it is possible to compare the work done in any state with that done in any of the other forty-seven not only as to the total value of such work, but also on each of twenty different points This makes it possible not only to compare state with state, but also to say wherein each state excels or is deficient in each detail The Council hopes at the end of two or three years to make another survey for confirmatory and comparative purposes the second survey to be used as a basis for classification of the states according to the character of the public health work being done, somewhat along the same lines as the classification by the Council on Medical Education of medical schools into A, B and C classes

3 As stated in last year's report, the Council has been desirous of inaugurating a survey of municipal public health work similar to that made by Dr Chapin in state public health work but so far has been unable to devise any feasible plan for this purpose The same situation is manifest in the municipal field Practically all of our leading cities and many of the smaller ones have during the past twenty-five years established some kind of municipal health organization, either through definite organization or by slow development. The form which this organization has taken, however, has been largely accidental or determined by the views of those responsible for the organization or administration of each individual local department. In many of our cities, there are today local health organizations that are completely manned and equipped and giving excellent and efficient services to the people for the protection of the public health On the other hand there are many local public health organizations which exist on paper only which consist of so-called health officers without adequate training owing their appointment to political influence, drawing in some cases ridiculously small salaries for an indefinite amount of services, having no adequate machinery or properly equipped laboratories to carry on their work, and entirely unable to protect their community against disease. Not only is it impossible to say what are

today the actual facts regarding municipal health work, but it is equally impossible with the data at our disposal to determine what should be the ideal conditions During the past year, the secretary has received a number of requests for information and advice as to what kind of a health department should be organized in a town of a given size, how many men would be required, how much should be spent for equipment, and how large an appropriation should be made to cover the annual cost of operation These questions cannot be answered definitely at present During the coming year the Council hopes to make a definite study of this problem and to present a report which will show what is actually being done in municipal health work, how much it is costing, and what kind of health organization should be established for cities of different sizes

4 In the fourth field of investigation, that of voluntary public health organizations, the report of the Central Committee on Public Health Organization, referred to in our report for 1915, was published in pamphlet form in the fall Two editions have been printed and distributed, and the supply is practically exhausted This pamphlet, containing the tabulated reports of forty-six voluntary public health organizations, was immediately accepted as authoritative and has been in great demand At the Rochester meeting of the American Public Health Association, held in September, 1915, a conference of executive officers of voluntary public health organizations was held, at which the Central Committee presented its report After general discussion, the report was accepted and the committee discharged and a new Committee on Coordination created with power to act. This committee consists of Dr Charles J Hatfield, Philadelphia, secretary of the National Association for the Study and Prevention of Tuberculosis, Prof Selskar M Gunn of Boston, secretary of the American Public Health Association, Dr W F Snow of New York City, executive secretary of the American Social Hygiene Association, Mr Curtis E Lakeman of New York City, secretary of the American Association for the Control of Cancer, and Dr Frederick R Green, secretary of the Council This committee has had two meetings since its appointment, and is carrying on a discussion by correspondence as to the best means of promoting cooperation between existing organizations The proposition for a joint meeting of all the organizations interested in connection with the 1916 session of the American Medical Association could not be carried out The efforts of the Council during the last three years in the direction of cooperation, however, have borne fruits in the cultivation of a spirit of cooperation among many of the leading organizations to an extent that amply justifies the efforts that have been made The death of Dr Favill and the necessity of taking up other lines of work for the time being have prevented the further development of this plan, but we hope that, during the coming year, further efforts in this direction may be undertaken

PUBLIC EDUCATION

PRESS BULLETIN

The *Press Bulletin* was published regularly during the latter part of 1915 Since the first of January, 1916, however, the bulletin has been temporarily suspended, owing partly to the necessity of overhauling and revising the mailing list and changing the form of the bulletin, but principally to the fact that the secretary's time and efforts have been necessarily diverted into other channels

SPEAKERS' BUREAU

Owing to the limited appropriation given to the Council this year, the secretary recommended to the Council at its October meeting that the Speakers' Bureau be put on a self-supporting basis, namely, that the local organization and committees asking for speakers be asked to pay the actual traveling expenses and entertainment of the speaker This recommendation was made for several reasons It has been apparent for several years past that the amount of money available for the payment of speakers' expenses would be at best entirely inadequate for the amount of work which should be done. If this work had been pushed during the last five years, it would be possible to use practically all of the available surplus of the Association each year in supplying speakers for local public health meetings This is manifestly impossible It is equally impossible for the Council to use any large portion of its appropriation for this purpose If only one or two thousand dollars a year can be spent in this work, the amount available would generally be completely exhausted in the first six months of the year, leaving nothing for the remainder of the year, and at best it would be possible by such a plan to provide only a small portion of the speakers asked for and desired In a word, for the Council to attempt to finance a speakers' bureau, which would cover the entire country, would mean either that it would need a very large appropriation for this purpose or that it would be compelled to limit its work in this direction to the very narrow boundaries of a small appropriation On the other hand, if the bureau is made self supporting, there is no limit to the extent to which it can be developed

The Council approving of this proposition, it was necessary to revise and reprint the speakers' list, also to advise each one of the 250 speakers on the list that the plan of operation had been changed and to secure his consent to fill appointments under the new plan This has been done during the winter Early in the summer it is hoped that we can issue a new announcement which can be distributed in large numbers throughout the country

PAMPHLETS

The most marked development of the past year in the educational work of the Council has been the number and variety of pamphlets on different subjects printed and distributed by the Council The list in Table 1 will show the number

TABLE 1 — NUMBER AND CHARACTER OF PAMPHLETS PRINTED AND DISTRIBUTED, JUNE 1, 1915, TO MAY 16, 1916

Defense of Research, Pamphlet XXVIII "Biological Research Its Value and Dangers"	2,000
Report of the Committee on Conservation of Vision, 1915	1,000
Conservation of Vision, Pamphlet I "Schoolchildren's Eyes"	1 000
Conservation of Vision, Pamphlet III. "Wearing Glasses"	1,000
Conservation of Vision, Pamphlet IV "The Relation of Illumination to Visual Efficiency"	1,000
Conservation of Vision, Pamphlet V "Trachoma in Eastern Kentucky"	1,000
Conservation of Vision, Pamphlet VI "Auto Intoxication and the Eye"	1,000
Conservation of Vision, Pamphlet VII "Eye Strain"	1,000
Conservation of Vision, Pamphlet XII "Ordinary Eye Diseases"	1,000
Conservation of Vision, Pamphlet XIV "Visual Requirements of Transportation Employees"	1,000
Conservation of Vision, Pamphlet XVI "How Whisky, Tobacco and Drugs Affect the Eyes"	1,000
Conservation of Vision, Pamphlet XVII "Oculists and Opticians"	1,500
Conservation of Vision, Pamphlet XVIII "Preparations for the Oncoming of Blindness"	1,000
Conservation of Vision, Pamphlet XIX "What to Do for Blind Children"	1,000
Conservation of Vision, Pamphlet XX "Blindness from Wood Alcohol"	1,000
Prevention of Cancer, Pamphlet VIII "What Every Woman *Should Know About the Breast*"	7,000
Sex Hygiene "Margaret the Doctor's Daughter"	6 000
Sex Hygiene "Life Problems"	6,000
Sex Hygiene "John's Vacation"	6,000
Sex Hygiene "Chums"	5,000

TABLE 1—(*Continued*)

Public Health "Baby Welfare"	4,100
Public Health "Hookworm"	1,000
Public Health "House Fly"	2,600
Public Health "Measles"	3,500
Public Health "Pure Water"	500
Public Health "Scarlet Fever"	6,500
Public Health "Small Pox"	1,000
Public Health "Tuberculosis"	8 100
Public Health "Typhoid Fever"	6,100
"Save the Babies"	281,000
"Baby Health Conferences"	6 000
"Minimum Health Requirements for Rural Schools"	750,000
"The Present Condition of Public Health Organization in the United States"	1 500
Sample pages, "Regulation of the Practice of Medicine"	1 000
'Regulation of the Practice of Medicine"	1,000
"The Public and the Medical Profession"	1,000
"A Report on State Public Health Work'	1,000
"What Is Chiropractic?"	2,000
"Facts for the Tuberculous"	500
"Public Health Cartoon Prints"	2,600
"An Outline for a Study Course on Public Health" (for women's clubs)	3 000
"Some Essentials to the Development of Efficient Health"	1,000
"State Regulation of the Practice of Medicine"	1,000
"State Health Organization '	1,000
Total	1,133 500
Score Cards	55 000
Grand total	1 188 500

and character of such pamphlets printed and distributed from May 22, 1915, to May 16, 1916.

The largest two items on this list require some explanation. The pamphlet on "Minimum Health Requirements for Rural Schools" printed last year was the first of a series of four pamphlets prepared by the Committee on Health Problems in the Public Schools appointed jointly with the National Educational Association. As last year's report shows, 55,000 of these pamphlets were printed, of which 40,000 were sent to Hon. P. P. Claxton, the federal commissioner of education, for distribution through his bureau. At the meeting of the National Council of the National Educational Association, held in Cincinnati, Feb. 23, 1915, it was agreed that the widespread distribution of this pamphlet was the most important single work to be undertaken by the committee. Dr. Claxton asked for an edition of 750,000 at an estimated cost of $3,000. The publication of this large edition was made possible through the generosity of the Elizabeth McCormick Memorial Fund of Chicago, as stated in last year's report. Following the San Francisco session, the preparation of this edition was undertaken, and by the last of December, 1915, the entire edition of three quarters of a million pamphlets had been printed, bound, addressed and mailed to every rural schoolteacher and rural school board member throughout the country, as well as to every state and county superintendent of education and every state normal school. The addressing and franking was done through the federal Bureau of Education.

This work is a striking example of the value of intelligent cooperation between various organizations interested in the same line of work. The pamphlet was prepared by a joint committee of the American Medical Association and the National Educational Association. The funds for printing an edition of three quarters of a million copies were supplied by the Elizabeth McCormick Memorial Fund of Chicago, and the addressing and distributing was done through the federal Bureau of Education. In this way, at an actual expense of $3,000, 750,000 pamphlets were placed in the hands of those most interested in the problem of rural school conditions and those most capable of remedying conditions.

The second instance of cooperation is to be found in the printing and distribution of 281,000 copies of the "Save the Babies" pamphlet. This pamphlet, originally issued by the Committee on Women and Children's Welfare, as an adjunct of baby health conferences, has proved exceedingly popular, and has created a demand for itself far in excess of the original plan. Here again the problem of cost enters into the situation, but in this instance this difficulty was solved in an unexpected manner. Mr. G. F. Earnshaw of the Earnshaw Knitting Company, Chicago, a firm engaged partly in the manufacture of children's garments, became greatly interested in the entire problem of child conservation, and suggested the possibility of utilizing the dry-goods stores of the country in a systematic campaign for the education of mothers. This plan was suggested too late in the year to permit of full development in time to coincide with the proposed Baby Week of the federal Bureau for Child Welfare. Owing to the short amount of time available as well as the expense involved, it was not possible for the Council to take up Mr. Earnshaw's first proposition, namely, that the Speakers' Bureau of the Council furnish speakers on public health for mothers' meetings to be held in all the large dry-goods stores during the proposed Baby Week. The secretary, however, offered to bring the local dry-goods men and the officers of the local medical organizations into communication with each other and to turn over to the local societies in each case the task of furnishing speakers for these meetings. This was done in a large number of instances.

In twenty-nine cities, cooperation was established between the dry goods stores and the local medical organizations; the medical society furnished speakers and the dry goods stores furnished a meeting place and advertised the meetings to the public. Women and especially mothers were urged to attend. In some cities, meetings were held daily or twice a day. In seven other cities, meetings were held by the local dry goods stores and addresses made by speakers selected by the proprietors. In a number of cases baby health conferences, children's clinics and health exhibits were held in connection with the baby week observances. Cooperation was established not only with local medical societies, but also with local health departments, public schools, public libraries, commercial clubs, trained nurses' organizations, day nurseries, hospitals and other philanthropic organizations. Over 200,000 copies of the "Save the Babies" pamphlet were sold to dry goods stores for free distribution to mothers. The cooperation shown in working out this plan has been most gratifying, and the possibilities of further development in succeeding years are encouraging.

Attention should also be called to the nine public health pamphlets prepared and printed for the use of state boards of health. Of these, over 30,000 have been printed and distributed during the past year. Further additions to this series are in preparation.

WORK OF THE MEDICOLEGAL BUREAU FOR THE YEAR ENDING MAY, 1916

During the past year, work on the three digests, as mentioned in the report for the year ending May, 1915, has been in progress. These are the digest of the Supreme Court decisions on the medicolegal relation of physicians, the digest of Supreme Court decisions with reference to malpractice and the digest of Supreme Court decisions on the powers and duties of state boards of health. The first of these digests is about half completed, 874 cases out of a total of 1,697 having been abstracted and cited. This digest covers the personal rights and liabilities of physicians for personal injuries, exclusive of malpractice, crimes and contract; physicians as witnesses, and miscellaneous medicolegal relations of physicians, chiefly statutory. On the subject of professional malpractice we had on hand at the last report 261 cases; these have been added to. It is estimated that there are between 1,200 and 1,500 cases on record on this subject. On the powers and duties of state boards of health there are 396 decisions on hand and abstracted, 100 decisions which have not as yet been abstracted, and 256 citations for which we have not as yet been able to secure the decisions, making a total of 752 cases under this head. These have been materially added to since the last report, making approximately 800 cases in all.

During the current year, approximately eighty-nine inquiries have been received and answered on medicolegal subjects.

These inquiries embrace requests for information as to the liability of physicians in contract and malpractice, and various miscellaneous subjects, such as advertising, anesthetist's fees, powers and duties of medical examiners, obligation resting on physicians to care for patients, laws affecting Christian Scientists, chiropractors and other cults, embalming, fee-splitting, use of narcotics, marriage, sterilization, midwifery, mental defectives, nurse registration, pharmacists, ownership of Roentgen-ray plates, vital statistics, and miscellaneous inquiries in regard to nuisances and public health in general.

LEGISLATION

FEDERAL

Quite a number of laws have been introduced into Congress during the past winter touching on public health matters and of interest to physicians. To date none of these have passed excepting a bill providing for the national control of leprosy.

STATE

During the past winter the legislatures in ten states have been in session. The following summary shows the principal legislation as far as it has been reported up to the time of drafting this report.

Ten states have been in session, and of these from the reports so far received, five have adjourned. Laws have been enacted as follows:

KENTUCKY. Adjourned. Laws limiting the right to bring an action for malpractice to one year, providing penalties for fee-splitting, forbidding illegal advertising and regulating the sale and manufacture of food supplies.

LOUISIANA. Still in session.

MARYLAND. Adjourned. A law increasing the appropriation for the state department of health, $18,000, and Johns Hopkins University, $15,000.

MASSACHUSETTS Still in session Measures have been enacted amending the drug laws, the laws specifying the duties of local boards of health, the law for the care of tuberculous cases and regulating the stamping and labeling of receptacles for food and the like

MISSISSIPPI Adjourned Laws were passed increasing the appropriation for the state health department from $23,000 to $32,000 annually, establishing a sanatorium for the care of incipient tuberculous patients, and one for the prevention of blindness

NEW JERSEY Still in session

NEW YORK Still in session A measure transferring the state quarantine to the federal government has been passed

RHODE ISLAND Adjourned No report

SOUTH CAROLINA Still in session

VIRGINIA Adjourned Laws were enacted to provide for the control of potable waters, authorizing counties and cities to establish tuberculosis sanatoriums, to restrain persons suffering from tuberculosis, providing fees and maintaining indigent consumptives, amending the law defining the powers and duties of the state board of health, and prohibiting the use of roller towels

NEW COMMITTEES

November 11, the secretary received from Dr John B Andrews, secretary of the American Association for Labor Legislation, a pamphlet containing a tentative draft of a model bill for industrial insurance, together with an editorial for publication in THE JOURNAL and the *Press Bulletin* In this tentative bill, the provisions regarding medical services were intentionally omitted in order that this entire question might be taken up by the representatives of the organized medical profession and properly discussed Realizing the importance of this subject to the physicians of the country, and knowing that these questions had been practically ignored in the passage of the national insurance acts in Germany, England, Denmark, Norway and other European countries, the secretary at once wrote to Dr Andrews proposing the appointment of a committee to represent the American Medical Association and to work with him in the elaboration of the details of the model bill affecting physicians A cordial reply was at once received from Dr Andrews, stating that he would be very glad to have such a committee appointed After discussion with the chairman and Dr Craig and some correspondence with Dr Alexander Lambert, it seemed obvious that this entire question, being both an ethical and an economic one, should be in the hands of a committee that would be recognized as representative and authoritative The Judicial Council has no authority under the by-laws to appoint committees, while our Council has such authority The secretary, therefore, proposed to Dr Favill and Dr Lambert that the Council on Health and Public Instruction appoint a Committee on Industrial Insurance to consist of Dr Alexander Lambert, chairman of the Judicial Council, as chairman, Dr Henry B Favill, and a third member to be selected by Dr Lambert, who could cooperate with him in New York After some correspondence, Dr Lambert suggested Dr Frederic J Cotton of Boston, and in accordance with this recommendation, the chairman appointed such a committee This action was confirmed by the Council, and the committee appointed The death of Dr Favill makes a vacancy on the committee which will be filled in the near future Dr Lambert as chairman of the committee has secured the services of Dr I M Rubinow of New York as the executive secretary of the committee, has established headquarters, has begun the collection of material on social insurance, and is now prepared to make an exhaustive and authoritative study of the subject for the benefit of the Association and its members The Council urgently recommends that the House of Delegates request all state and local organizations to suspend action on this important subject until the special committee has formulated a definite platform on which the United States medical profession can stand, and a definite program for looking after the interests of physicians in this work The details of the work of the committee will be found in the special report by Dr Lambert

STANDARD STUDY PROGRAM FOR WOMEN'S CLUBS

In 1913, at the annual meeting of the Conference of State and Provincial Boards of Health, Dr S J Crumbine, secretary of the State Board of Health of Kansas, presented a program which he had prepared at the request of the women's clubs of Topeka, consisting of study outlines for eighteen meetings of the club to be devoted to the study of public health This program proved so popular that in a short time Dr Crumbine received requests for it from clubs in all parts of the state Impressed with the value of this method of public education, he recommended, as president of the Conference of State and Provincial Boards, that a committee be appointed to prepare a standard program for those women's clubs desiring to take up the systematic study of public health conditions This recommendation being approved, the committee was appointed, consisting of Dr Crumbine, Dr J N Hurty of Indiana, and the secretary of the Council In 1914, at the biennial meeting of the General Federation of Women's Clubs, this subject was discussed with Mrs S S Crockett, chairman of the Department of Public Health, and Miss Helen Louise Johnson, chairman of the Department of Home Economics of the General Federation, as well as with the members of the general board Miss Johnson on the unanimous request of the committee agreed to cooperate with us Since that time, three meetings of the committee have been held and a considerable amount of correspondence has been carried on, which has resulted in the preparation of a provisional program for public health study in women's clubs consisting of programs for eighteen meetings An advance edition of this program has been printed and 3,000 copies distributed at the New York biennial of the General Federation

MIDWINTER CONFERENCE

By special arrangement, the Midwinter Conference this year was held not only in connection with the Council on Medical Education, but also with the Federation of State Medical Boards and the American Association of Medical Colleges By agreement between the four secretaries interested, the time was divided up so that the joint meetings could be held with separate business meetings of the four organizations The second day of the conference was devoted to public health and legislation, the morning being occupied by a discussion of the state regulation of the practice of medicine The program this year was especially significant Gov George H Hodges of Kansas presented the opening address on the subject, giving his experience as an executive, and Prof Irby R Hudson of Nashville, Tenn, secretary of the new Board of Preliminary Examiners of that state, presented a year's experience with this new law These addresses were discussed by Dr Horace D Arnold, representing the Council on Medical Education, Dr Walter L Bierring, representing the Federation of State Medical Boards of the United States, Dr W J Means, representing the American Association of Medical Colleges, Dr Royal S Copeland, representing the homeopathic school, and Dr John K Scudder, representing the eclectic school The afternoon was devoted to a discussion of state public health organizations, Dr Charles V Chapin of Providence, R I, discussing this subject, and Dr J W Kerr, Assistant Surgeon-General of the United States Public Health Service, discussing some essentials to the development of efficient health organization The program was on the whole one of the most profitable which has been presented on these subjects

SPECIAL ACTIVITIES

PUBLIC HEALTH SUNDAY

Following the custom of the past five years, the secretary of the Council, with the cooperation of the local committee, arranged to furnish a speaker on some appropriate public health topic for every church in Detroit desiring such an address, Sunday, June 11 The indications at the time this report is drafted are that this occasion will be quite as successful as in previous years

PUBLIC HEALTH MEETING

One of the most serious defects in our annual program in past years has been that there was no marked event which brought the annual session of the Association to a close The success of the Commemoration Day meeting at San Francisco last year, and the growing interest in the public health addresses in the different churches, suggested the idea of holding a general meeting open to the public for the presentation of appropriate public health topics on Friday afternoon, as the closing event of the session This plan having been approved by the Council and the Board of Trustees, arrangements were made for securing the Lyceum Theater, and through cooperation with the Michigan State Board of Health and with the Detroit Department of Health, plans have been made to observe Friday, June 16, as a special public health day A public health parade under the auspices of the state board of health will be held just before the meeting An appropriate program has been arranged, and through placards, newspaper notices, special announcements, etc, an invitation has been issued to the people of Detroit to attend this meeting as the guests of the Association It is hoped that the success of the first meeting will justify the Council in making this meeting a permanent feature of the annual sessions of the Association

OFFICE WORK

During the past year, the secretary has received 6,000 letters and has written 7,638 Requests for information from the sources indicated in Table 3 have been received and answered

TABLE 3—REQUESTS FOR INFORMATION

Source	Number
Attorneys	2
Boards of education	10
Boards of health	94
Clubs	33
Federal departments	10
Hospitals	11
Libraries	108
Life insurance companies	7
Medical Societies	14
Ministers	6
Nurses	37
Physicians	552
Publications	33
Universities colleges high schools etc	134
Y M C. Associations	18
Miscellaneous	673
Total	1,742

SUBCOMMITTEES

The reports of the various subcommittees are appended herewith The members of these committees have labored faithfully and enthusiastically to advance the special lines of work assigned to them, and the results of their labors are herewith submitted for the careful consideration of the House of Delegates and its reference committees

Respectfully submitted

Henry M Bracken, Chairman,
Walter C Cannon,
Watson S Rankin,
Milton Board
Frederick R. Green, Secretary

REPORTS OF SUBCOMMITTEES OF THE COUNCIL ON HEALTH AND PUBLIC INSTRUCTION

Report of Committee on Social Insurance

To the Council on Health and Public Instruction

In January, 1916, the chairman of the Council on Health and Public Instruction, Dr H B Favill, wrote to the chairman of the Judicial Council asking that the chairmen of the two councils join together in forming a committee to study social insurance in its relation to the medical profession The importance of this work had recently grown more and more evident and it seemed that in all probability this subject would be, in the next few years, one of the most important that would occupy the attention of the profession both from an economic and a purely medical and surgical point of view Dr Favill appointed as a third member of this committee Dr Frederic J Cotton of Boston, who had been chairman of the Committee on Compensation of the Massachusetts State Medical Society for a number of years Dr Lambert, chairman of the Judicial Council, was appointed chairman of this committee. The committee was appointed under the power invested in the Council on Health and Public Instruction to appoint committees to carry on the respective purposes of the Council, and it seemed evident that any subject such as social insurance, affecting so intimately the health of the community and the interests of the profession, was one which clearly came under the duties of the Council to study and to assist in its development, and especially to safeguard the interests of the profession in this development

At a meeting on Feb 9, 1916, the Board of Trustees confirmed the appointment of this committee by the adoption of the following resolution

"That the committee appointed jointly by the Council on Health and Public Instruction and the Judicial Council, consisting of Drs Alexander Lambert, Frederic J Cotton and H B Favill, be approved, and that the purpose and duties of this committee be understood to be the careful compilation of information in *re* social or health insurance and the relations of physicians thereto, and to do everything in their power to secure such constructions of the proposed laws as will work the most harmonious adjustment of the new sociologic relations between physicians and laymen which will necessarily result therefrom, and that this committee be authorized to carry on its work wherever seems most desirable"

The services of I M Rubinow, M D Ph D, who was Chief Statistician of the Ocean Accident & Guarantee Corporation and President of the Actuarial Society, were secured as Executive Secretary, and a bureau has been opened at 131 East Twenty-Third Street, New York City

The Committee on Social Insurance presents to the House of Delegates a statistical study of the medical profession of the United States in its various relations, both in the ratio of physicians to population, their geographic distribution, and the various other statistical facts that are of importance and interest to the profession There are at present no reliable figures concerning the income of physicians and other economic facts of interest The committee is endeavoring to obtain reliable information concerning this matter

In the near future it is the intention of the committee to undertake the following duties

First—to educate the American medical profession in the general principles of social insurance, particularly health insurance, the economic and social significance of the movement to obtain such insurance throughout the United States, and the absolutely essential part which the medical profession must play in a successful adaptation of this new legislation to American conditions,

Second—the bureau will consider it as part of its work to answer all questions which any physician may desire to write to it, asking for information, facts or figures bearing on social insurance in any of its phases, and to be in reality a bureau of information for the medical profession in regard to the details of organization, of medical aid in various forms of social insurance, both in European countries and the United States,

Third—the committee considers it its duty to appear when advisable before the legislative bodies in this country with a view to bring about friendly understanding between all parties concerned and to protect the legitimate economic interests of the profession in the laws coming up for discussion concerning social insurance

The work of this committee should be directed in such channels as to avoid the conflict which has arisen in England at the beginning of a similar movement and which has resulted in a very large amount of bitterness between the profession and the public that might easily have been prevented by appropriate timely action.

It is further the intention of the committee to undertake the following lines of work without assuming the obligation of completing them within any specified time

First—to collect a bibliography on social insurance with special reference to medical questions involved,

Second—to undertake, by correspondence, to get in touch with the various sickness insurance organizations in Europe so as to obtain first hand information as to their experience

Third—to undertake a statistical study of hospital and dispensary facilities in this country in view of the possibility of mutual sickness societies exist to which both employers and employees must contribute, medical attendance is furnished and medicines and sick benefits to disabled members, and in case of death, relief to their families. Cash benefits or annuities to widows and orphans or dependent parents may also be paid. Assistance for wives and children of members called into the territorial or reserve military services may also be provided, and special pensions for widows and orphans of such deceased members.

These obligatory societies are maintained by deductions from wages which must not exceed 2 per cent. of the wages nor $9.60 per year, by payments by the employers of a sum equal to one-half the aggregate amount paid by members, by subsidies from the government, by sums donated or bequeathed by charitable persons, and by fines incurred for infringement of rules or regulations. The government looks on these societies with great favor. In 1907 about 6,000,000 wage earners were thus protected, leaving probably an equal number of the industrial workers of France still uninsured against sickness.

Switzerland.—Switzerland, having passed its law of subsidized sickness insurance in 1912, has the latest and best law of this type. According to Rubinow, the Swiss law not only aims to stimulate the formation of sick benefit societies but also to improve the nature of their service. This law provides a schedule of subsidies adjusted to the extent of the society's activities, 67.5 cents for children under 14 and the same amount for each male adult, 77.2 cents for each female adult if only one of the two mentioned functions—sickness benefits or medical aid—is provided, and 96.5 cents if both features are furnished, and $1.06 if sick benefits are furnished for 310 consecutive days. This subsidy may be increased in mountainous districts to $1.35. An additional subsidy of from $3.86 to $7.72 is given in cases of confinement. The Swiss law further stipulates that sick benefits shall not be less than 19.3 cents per day. It requires, also, that not less than three months must expire after entrance into the society before the new member may draw benefits, but a waiting time after falling sick must not be longer than three days, and the confinement benefits must be granted for at least six weeks. The law also requires that the society shall be financially sound, and it prescribes a definite system of organization of medical and pharmaceutical help which prevents excessive cost of services and gives to the sick member a certain selection of physician. This last factor of cost and choice of physician, we shall see later, has been the stumbling block in all countries.

It has been a noticeable feature in the subsidized state insurance schemes that the rapidity and energy of their growth seems to have been in ratio to the subsidies obtained from the state. Without state aid only the more thrifty and well-paid of the workers seem voluntarily to insure, and many of these often are unable to keep up their insurance, and drop it. As long as the state held aloof and simply regulated the control without giving assistance, the growth of this voluntary insurance has always been slow. The more the state has given assistance, the greater has been the number of workmen who have been able to obtain the protection they seek. After twenty-five years' experience in various voluntary forms of sickness insurance, subsidized or not, several nations in Europe have realized that the logical conclusion was compulsory state insurance in which workmen and employers alike contributed and the state assisted with amounts sufficient to insure the payment of the management of the huge machine. The ratio of those insured to the total population is interesting, comparing it in the countries of voluntary insurance and compulsory insurance.

Denmark has a total population of 2,757,000, insured 710,000, which is 25.8 per cent. of the population. In France the 6,000,000 insured equals about 10 or 12 per cent. of the population, in Great Britain the 14,000,000 insured of the 45,000,000 population is 31 per cent. of the population. In Germany, in 1912, there was a total population of 64,000,000 and there were 19,000,000 insured, giving about 31 per cent. insured. It is very noticeable that five countries of Europe between 1909 and 1912 passed acts of compulsory insurance: Norway in 1909, Serbia in 1910, Great Britain in 1911, Russia in 1912, and Roumania in 1912.

In discussing workmen's compensation last year, it was shown that 6 per cent. of the industrial workers suffered from accident during the year, and it was also stated that from 40 to 50 per cent. suffered from some form of sickness. It was shown last year how clearly certain occupations increased the liability to accident, and attention was drawn to a table published showing the influence of sex and occupation on certain diseases. Every important occupation has its own definite sickness rate. This is outside of the so-called well recognized occupational diseases. These two tables are published in page 39 of the Judicial Council Report for 1915.

In the Report on Sickness Insurance of the Committee for Immigrants of America, discussing these same tables, it is shown that the data coming from the Leipzig sick fund eliminate the variations produced by race, sex and age. The industrial factor is isolated and is evidently a strong one. The variation between industries is less marked than in the case of accidents. All excess of sickness found above the minimum rate of those of office employees can be charged in a great measure to industrial conditions. For example, if the chance of taking sick is only 21 per cent. for office employees, for men, and 21.4 per cent. for women, and in hotels and restaurants the rate is 32.5 per cent. for men and 40.9 per cent. for women, and the annual loss of days through sickness per person is, for the office employees, 5.8 for men and 7 for women, and for hotels and restaurants it is 8 days for men and 12.2 for women, then the extra 2.2 days' loss per person per year for men and 5.2 per person per year for women can be justly laid to the difference in the environment of those working in hotels and restaurants and those working as office employees. The loss, therefore, should be distributed as in accident insurance, so that the industry may bear its just share and the state not only accept equal responsibility for sickness as for accidents to assist those who need it. It would also seem that there was equal justification for such aid as that in which the states and municipalities now accept the responsibility of spending large sums in preventive hygiene, as seen in health department work, and also large sums in public hospitals and dispensaries.

COMPARISON OF METHODS ABROAD

To understand compulsory insurance and its workings, a comparison of the methods of Norway, Russia, Austria Hungary, Germany and Great Britain will give the clearest idea.

Russia.—The mining industry was the first one of the great industries to develop in Russia, and as long ago as 1806 there was a law requiring proprietors of mining and metallurgical industries to establish hospital facilities for sick or injured employees, and many of these establishments were owned by the state or crown. This idea was developed further in 1866 when an epidemic of Asiatic cholera broke out in Moscow. The governor of Moscow, considering the large factories where the insanitary conditions and large number of workers were the means of spreading the cholera epidemic, in a letter to the minister of the interior requested that they be required to establish hospitals and employ physicians in connection with their industrial hospitals. The law of 1866, therefore, provided that there should be established in connection with each factory employing 1,000 workers a hospital with ten beds, and at each factory employing more than 1,000 workers fifteen beds or more, and at each factory employing less than 1,000 workers five beds or more at the rate of one for each hundred workers. Although this law was declared to be a temporary measure, it is still in force. The establishment funds connected with all large industries in Russia are based on the existence of this original order of the emperor.

Outside of the city of Moscow the following regulations established by the provincial factory commission is given as a type.[3] Factories employing 500 or more workmen are required to have a factory hospital with one bed for each hundred workmen, a resident physician and a "feldsher," who is a medical assistant of higher grade than a trained nurse. When the number of workmen exceeds 3,000, two physicians must be employed, one of whom must reside at the factory. Factories employing from seventeen to 500 workmen may make arrangements with the zemstvo hospitals, or several factories may combine for establishing a common hospital When the factory hospital has less than five beds, the physician need not reside at the factory but must not live more than 7 versts (4.7 miles) from it and must visit it at least three times a week, but the hospital must have a resident feldsher If the factory has no hospital of its own and is more than 2 miles from the hospital to which it can send its workmen, this factory must have an emergency room with all necessary appliances for first aid, and if the number of workmen exceeds 200, it must also have a feldsher The hospital which cares for more than 500 workmen must have a general ward and contagious ward with facilities for isolation, and a dispensary for outside patients, where both men and women are employed, there must be wards for each sex. In factories employing from 200 to 500 workmen, the hospital must contain at least two wards an examination room, and a waiting room for outside patients In factories employing less than 200 workmen two wards are required one for the beds and one for the outdoor patients Where 200 or more women are employed, a special maternity room must be provided and also the services of a resident trained midwife, where less than 200 women are employed such room and the services of a midwife must be furnished by the employer when necessary

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[3] Twenty Fourth Annual Report, Commissioner of Labor, vol. ii.

While these regulations here are given as a type, apparently only the commissions of Petrograd Moscow and the Warsaw provinces require maternity wards in factories, and the regulations by different commissions vary considerably in detail The factory owners are forbidden by the law of 1866 from charging their employees for this hospital service. There is a tax in sixteen of the large industrial centers of Russia, which is a hospital tax on the wage earners, and in return for this tax the wage earners obtain the right of free medical treatment in hospitals not only for themselves, but also for their minor children In Petrograd there are sufficient municipal hospitals so that the factories are relieved of their responsibility in this matter Moreover, the employees are not taxed as in other cities and because they have no right of free medical treatment in the municipal hospitals the factory owners are required to meet the cost of treatment of their employees in the hospitals and the factory physician must visit the factory at stated intervals, for the factories are required to provide for treatment of outside patients by a physician as well as an emergency ward for first aid. Besides the daily visits to the factories employing over 1,000 persons the factory physician must treat the patients at his house or at their houses

In the rural parts of Russia there has developed a system of state medicine under the zemstvos, which are equivalent to our board of overseers of each county, and are elective in character These zemstvos have established hospitals presided over by physicians who are men or women, with whom there are nurses and feldshers, and midwives These give the entire medical care free to the peasant population of the district. The well-to do nobles employ other physicians or the same physicians on a fee system Thus it seems that 90 per cent. or more of the people of Russia are cared for under a system of free state medicine Often there is a combination between the special factory hospitals and the establishment funds and the zemstvos supplying hospital and medical facilities to the employees of the establishment funds The Russian system of compulsory health insurance, therefore, seems to be a combination of establishment funds, especially in the urban districts and a rural system of free state medical service This, in practice seems to give excellent results

Norway—In Norway when the workmen's insurance against accident was considered compulsory sickness insurance was also recommended This however, was not adopted until some years later The organization of that is a series of district or communal organizations with a central state body This state organization has an equalization fund taken from part of the contributions for the state which protects the different communal societies against excessive sickness and mortality losses The societies pay benefits for the first six months of illness with not more than thirteen weeks in the second half year if sickness continues that long Industrial and agricultural workers are included, as well as unskilled laborers and inland sailors under certain conditions, but the insured must have been employed at least six days, which excludes a certain number of day laborers But if these are not insured under the sickness insurance, they are provided for under the accident insurance law Seamen engaged in foreign trade are excluded, but sailors engaged in coastwise trade are included, even though they visit foreign shores for a period of ten days The workmen pay six tenths of the cost under this law, the employer one tenth, the state two tenths, and the commune one tenth For voluntary insured persons, not included under the compulsory section, the workman pays seven tenths, the state two tenths, and the commune one tenth All disputes between societies, workmen and employers are settled by a jury of those chosen by the communal authorities for three years, one a member of the committee, one an employer, and one a workman These decisions may be final or appealed to the Royal Institution of Insurance In case of questions of law, the appeal goes to the courts If a commune is a party in the case, the appeal goes to the Commission of Royal Insurance About 1,000 000 persons are insured under this law Besides this state law, there are some mutual insurance societies in Norway not under the state commission

Germany—Just prior to the passage of the sickness insurance law in Prussia, statistics show that 839,602 members belonged to registered friendly societies, 220,000 to miner societies, and about 200,000 to nonregistered friendly societies Only about half of those for whom the insurance law was intended had availed themselves of its protection

In the sickness insurance law first passed in 1883 no attempt was made to centralize control It apparently was realized that it was wisest to utilize existing agencies as far as possible The aim sought was mutual insurance with self-administration, and the development was through the already existing societies, and the various associations composed of members of the same trade or locality best lent themselves to this purpose Eight distinct classes of society, each absolutely independent of the other, were recognized the only common requirement being that they should make annual reports and conform to provisions of the law with reference to minimum benefits and methods of investing funds[4]

1 Communal societies (*Gemeindekrankenkassen*) These were not really societies but local institutions, founded by the authorities and required to accept all, of whatever occupation, who were obliged to insure but did not belong to any other sickness insurance society

2 Local societies (*Ortskrankenkassen*), established by townships, for the various trades, two or more townships often uniting to form one society At present the most popular of all because of their elastic management

3 Factory societies (*Betriebskrankenkassen*), created by proprietors of factories in which more than fifty workers are employed, particularly in trades in which the risk of sickness or accident is high Management is under the joint control of the workingmen and the employers

4 Builders' societies (*Baukrankenkassen*) which are practically establishment funds founded by contractors in building operations and in public works because of the great risks of these trades

5 Guilds, sick-clubs, or trade societies (*Innungskrankenkassen*), authorized by the national trades regulation law These do not possess legal personality, but are considered a mere function of the guilds or trade unions

6 Miners' societies (*Knappschaftskassen*), formed in accordance with the mining laws of the several kingdoms

7 Voluntary mutual aid societies (*Hilfskassen*) These are the friendly societies supported and controlled solely by members without any participation by employers Membership is usually without regard to trade They are not under the control of authorities except that they must grant the minimum benefits required by law

8 Independent state societies (*Landesrechtlichehilfskassen*) These are voluntary associations, organized under the auspices of certain kingdoms of the empire

The act of 1911 included the two large groups of domestics and farm hands which led to the establishment of a new type of so-called rural fund, which is also a local fund for workers mutual sickness societies exist to which both employers and employees must contribute, medical attendance is furnished and medicines and sick benefits to disabled members, and in case of death, relief to their families Cash benefits or annuities to widows and orphans or dependent parents may also be paid Assistance for wives and children of members called into the territorial or reserve military services may also be provided, and special pensions for widows and orphans of such deceased members

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[4] Frankel and Dawson Workingmen's Insurance in Europe.

These obligatory societies are maintained by deductions from wages which must not exceed 2 per cent of the wages nor $9 60 per year, by payments by the employers of a sum equal to one-half the aggregate amount paid by members, by subsidies from the government, by sums donated or bequeathed by charitable persons, and by fines incurred for infringement of rules or regulations The government looks on these societies with great favor In 1907 about 6,000,000 wage earners were thus protected, leaving probably an equal number of the industrial workers of France still uninsured against sickness

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Outside of the city of Moscow the following regulations established by the provincial factory commission is given as a type[3] Factories employing 500 or more workmen are required to have a factory hospital with one bed for each hundred workmen, a resident physician and a "feldsher," who is a medical assistant of higher grade than a trained nurse When the number of workmen exceeds 3,000, two physicians must be employed, one of whom must reside at the factory Factories employing from seventeen to 500 workmen may make arrangements with the zemstvo hospi-

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[3] Twenty Fourth Annual Report, Commissioner of Labor, vol ii

In the *Bulletin* of the United States Bureau of Labor, which gives this law in full, it is shown that the title of the act is to provide for the insurance against loss of health and for the prevention and cure of sickness and for insurance against unemployment, and for purposes incidental thereto. Under its provisions health insurance is compulsory on all employed persons aged from 16 to 70, except those in the naval or military services of the crown, those in other employment under the crown or under local or other public authorities for whom adequate provision already exists, employees of railway companies and the like provided for by suitable benefits, teachers provided for under other acts, etc. Those affected by the exceptions are comparatively few, and may, in the discretion of the insurance commissioners, be transferred to the compulsory insurance scheme. Persons who are not subject to the compulsory insurance mav voluntarily insure if they are engaged in some regular occupation and are wholly or mainly dependent for their livelihood on their earnings in such occupation or have been insured persons for a period of five years or upward, no person may become a voluntary contributor whose annual income from all sources exceeds $778.64, that is, 160 pounds, unless he has been previously insured for a period of five years or upward. There is no discrimination in respect of sex or of citizenship, but all insured persons must be residents of the United Kingdom.

TABLE 2.—AVERAGE NUMBER OF CASES OF SICKNESS FOR BOTH SEXES PER HUNDRED INSURED IN SICKNESS INSURANCE SOCIETIES, 1888-1907 *

Sex	Communal	Local	Factory	Building	Guild	Mutual Aid	Independent State	Total
Men	27.3	37.5	44.7	58.3	34.4	37.3	31.2	38.0
Women	22.2	33.6	37.4	47.3	26.6	33.7	28.8	32.1

* Frankel and Dawson. Workingmen's Insurance in Europe, Table 71.

The standard rates of insurance are 14 cents for men and 12 cents for women. This amount is made up of contributions from employer, employee and public funds, the amount paid by each depending on the insured person's rate of wages. If this reaches or exceeds 60.8 cents per working day, the employer pays 6.1 cents, male employees pay 8.1, and female employees 6.1 cents per week, nothing being contributed from the public funds. If the rate of wages falls between 49 and 61 cents a day, the employer pays for male employees 8 and for female employees 6 cents a week, and the employee, regardless of sex, pays 6 cents. When the rate of wages is between 37 and 49 cents a day, the employer pays 10 cents per week for men and 8 cents for women, the employee pays 2 cents, and 2 cents is contributed from the public funds. When the rate of wages does not exceed 37 cents a day, the employer pays for men 12 and for women 10 cents a week, the employee pays nothing, and 2 cents a week is provided from the public funds. These provisions relate only to employees of the age of 21 or upward. Employers are authorized to make payments in behalf of their employees and to deduct the employees' contributions from any wages payable by them to such employees. Contributions by voluntary contributors are made at rates fixed in accordance with a table prepared by the insurance commissioners and are payable weekly or at other prescribed intervals by the contributors themselves. No contributions shall be payable in behalf either of employed persons or of voluntary contributors after they have attained the age of 70 years.

A central administrative body known as the insurance commissioners was created as a body corporate, with the power to appoint officers, inspectors, referees, etc., subject to the approval of the treasury. An insurance committee was also constituted for every county and county borough, its membership consisting of not less than forty nor more than eighty persons, some of whom must be women. These committees are authorized to subdivide the counties or boroughs into areas over which district insurance committees shall have supervision and are required to make reports as to the health of insured persons and the conditions affecting the same within their respective counties and county boroughs, and also to disseminate information on matters relative to health, cooperating, if thought best, with local educational and other institutions. Causes of excessive sickness may be inquired into at the instance of insurance commissioners or of an approved society or by an insurance committee, and where such excess is due to neglect or insanitary conditions the costs of any extra expense may be demanded from the persons chargeable with such neglect, and an inquiry may be made by a special appointee of the secretary of state or local government board to determine as to the facts in the case and the justice of such claim.

The administration of the sickness, disablement and maternity benefits is committed, in the case of insured persons who are members of an approved society, such as friendly societies, trade unions, provident societies, etc., to the societies of which they are members, which societies are also charged with the duty of receiving contributions of their members in this behalf. Medical and sanitary benefits are administered through the insurance committees described below. This separation of the bodies administering the medical benefits from those administering the sick cash benefits has been the cause of serious administrative trouble. Persons not members of an approved society may pay their contributions through the postoffice, the fund thus created being subject to the control of the insurance committees.

There is a second part of compulsory insurance providing for benefit in cases of unemployment in certain trades. The board of trade administers this portion of the act, and the list of trades may be extended by this board. At present there are seven in number: building, including the construction, alteration and demolition of buildings, construction of works, including railroads, docks, harbors, canals, etc., shipbuilding, mechanical engineering, including the manufacture of ordnance and firearms, iron founding, the construction of vehicles, sawmilling, and machine woodwork. Employers and workmen pay equal shares of a weekly contribution of 10 cents for this form of insurance. While Parliament contributes annually a sum equal to one third of the total contributions received from employers and workmen during the year, in general the employer is expected to pay the contributions of both himself and his workman, deducting the workman's portion from wages payable to the latter.

Applicants for benefits under this branch of the act must show they have been employed in an insured trade in each of not less than twenty-six separate calendar weeks in the preceding five years, that they are capable of working but unable to obtain suitable employment, and have not exhausted their right to benefits under this part of the act. Workmen are not required to accept employment in place of striking workmen, or at a lower rate of pay than is customary in their line of employment in their district. Where, however, the employment is lost by reason of a stoppage of work due to a trade dispute in the establishment in which the workman was employed, he can receive no benefits so long as such stoppage of work continues unless he has during such stoppage become actively employed elsewhere in an insured trade. Workmen losing employment through misconduct, or voluntarily leaving employment without just cause, may receive no benefits for a period of six weeks from the date of such loss of employment. The benefits payable in cases of unemployment begin after the first week of the period of unemployment, and are fixed at $1.70 per week unless some other rate is prescribed. Employment benefits are not payable for more than fifteen weeks within a period of twelve months unless some other benefit period is prescribed, nor shall workers in general receive any unemployment benefit in excess of one week's benefit for every five contributions paid by them under the act.

TABLE 3.—PROPORTION OF CASES OF SICKNESS LASTING OVER THIRTEEN WEEKS BY SEX *

Duration of Sickness	Per 100 Cases of Sickness Males	 Females
From fourteen to twenty five weeks	3.5	5.7
Twenty six weeks and over	2.3	2.8

* Twenty Fourth Annual Report Commissioner of Labor, vol. 1.

of a lower wage scale Out of some 20,000,000 insured, about 7,500,000 are insured in local funds, another 7,500,000 in rural funds, and 3,000,000 in establishment funds, leaving only 2,000,000 for all other forms of funds Membership in mutual aid funds, which are equivalent to the friendly societies or fraternal orders, as a substitute for insurance in the compulsory institutions is only tolerated and at the price of forfeiting the employer's contribution

Contributions to voluntary societies are not fixed, but those to the communal societies are limited by law to from 1 to 2 per cent of the daily wages of daily laborers In others, contributions must not exceed from 3 to 4 per cent of the same In this the workingmen pay two thirds and employers one third. In practice, employers pay all and deduct the proper amount from wages This method avoids all necessity for collectors, contributions both of employers and employees being turned over to the societies at convenient intervals

The employer must enforce on his men the duty of insuring The workingman may or may not insure, as he pleases But whoever employs an uninsured workingman renders himself liable both to a fine and to the payment of all costs in case of sickness or accident In such cases the communal society of the district assumes the entire care of the employee gives medical care, and gives the usual cash benefit during disablement, for all of which the employer becomes liable to the society

Frankel and Dawson further draw attention to the strong tendency toward the disappearance of smaller societies by consolidation into larger central organizations, and in Leipzig and Dresden, where the sickness societies have merged into one local organization, the work is most effectively carried out The administration of a single large society has proved much more economical than in the numerous smaller societies displaced In 1907 there were 23,271 total societies with 8,972,210 men and 3,166,757 women members Table 1 shows the percentage and duration of sickness and the percentage of deaths in sickness insurance societies from 1888 to 1907

TABLE 1—PERCENTAGE AND DURATION OF SICKNESS AND PERCENTAGE OF DEATHS IN SICKNESS INSURANCE SOCIETIES, 1888 1907 *

		1888	1892	1903	1904	1905	1906	1907
1 Cases of sickness per year per 100 insured	Men	33.5	36.8	38.3	40.9	41.4	39.4	42.7
	Women	28.8	31.3	33.0	35.4	35.0	33.4	35.6
	Both sexes	32.6	35.6	37.0	39.5	39.8	37.8	40.8
2 Average number of days of sickness per case	Men	16.6	17.0	18.1	18.7	18.7	18.5	18.5
	Women	17.7	18.3	21.9	23.2	23.5	24.1	23.4
	Both sexes	16.8	17.3	19.0	19.7	19.8	19.8	19.6
3 Days of sickness per annum per 100 insured	Men	555.6	626.6	695.3	762.1	775.9	728.6	788.7
	Women	508.3	569.7	720.4	822.9	921.9	804.7	833.1
	Both sexes	547.0	614.7	701.5	777.4	787.5	748.1	800.3
4 Deaths per 100 insured	Men	1.00	1.03	86	84	86	81	84
	Women	77	74	61	65	64	60	61
	Both sexes	96	98	80	80	81	76	78

* Frankel and Dawson Workingmen's Insurance in Europe, Table 70

In Division 1 of this table there is a steady progressive increase in the amount of sickness in the period under observation, women enjoying more freedom from sickness than men not only in the total but also in each type of society This is probably due to the greater risk of accident in the trades in which men are employed, because for the first thirteen weeks the sickness society cares for both accident and sickness It is also due to the higher average age of the men The number of cases of sickness among the two sexes, as shown by Frankel and Dawson, differs considerably with the type of society

It is evident that the average duration of sickness, in the division of Table 2, so-called, has also increased, showing longer periods This is so marked that in spite of the fewer cases of sickness, the duration of sickness per member each year is greater than among the men This is probably due to the fact that the cases of brief duration are almost twice as numerous for males as for females, the cases of sickness of longer duration (lasting over three weeks) show the contrary

Austria-Hungary—Austria-Hungary follows closely the plan of Germany Previous to the passage of the compulsory law, Austria also had had large establishment funds and voluntary organizations, in some of which the employers were contributing, in some only the workmen, and in some instances both The number of workmen thus insured was relatively small, for there were only about 300,000 members in 748 societies, and the benefits given were inadequate to meet the situation All workmen and working women are included, as well as the employees in all branches of industry, trade and transportation, those engaged in navigation, forestry, agriculture and home industries, as well as those employed by the states and communes, may insure voluntarily Trade guild societies, private friendly societies and miner's societies which were willing to grant the minimum benefits of the new law, were continued District, building, trade and factory societies were distinctly the creations of the compulsory law The following six types of societies are recognized

1 District sickness insurance societies (*Bezirkskrankenkassen*) which, like the local and communal sickness societies of Germany, correspond to geographic districts

2 Factory sickness insurance societies (*Fabrikskrankenkassen*) organized by owners of large factories, not connected with trade guilds

3 Building trades sickness insurance societies (*Baukrankenkassen*), usually temporarily established by builders

4 Trade-guild sickness insurance societies (*Genossenschaftskrankenkassen*), corresponding to Class 5 of the German system

5 Private friendly societies (*Vereine*)

6 Miners' societies (*Bruderladen*)

To these original six classes there have since been added mutual sickness insurance societies comprised chiefly of employees, and there is also an eighth class—societies composed of apprentices The latter are offshoots of the trade-guild sickness insurance societies and are associated with them

In all organizations, except in the private friendly and miners' societies, contributions of employers and workingmen amount to two thirds and one third, respectively In private friendly societies, the employers need not contribute at all, and in the miners' societies only as required by separate statute In practice, the employers' friendly societies do more than the law requires, paying more than the legal proportion in the various organizations As in Germany, it is obligatory on the employer to enforce payments of workingmen If a newly engaged employee does not already belong to some society, the employer must report his name to the authorities not later than three days after work is begun For each neglect to do this, he may be compelled to pay a fine of about $5 and suffer imprisonment for two days

The system of sickness insurance is less developed in Austria than in Germany In Austria the first four weeks of accident insurance are taken care of by the sickness societies, and in Hungary the first ten weeks

Great Britain—In Great Britain, previous to 1911, insurance was carried on by so-called friendly societies, the membership of which was made up of the able-bodied active workingmen of England

The most complete and most recent scheme of social insurance is the national insurance act of Great Britain, of 1911

In the *Bulletin* of the United States Bureau of Labor, which gives this law in full, it is shown that the title of the act is to provide for the insurance against loss of health and for the prevention and cure of sickness and for insurance against unemployment, and for purposes incidental thereto Under its provisions health insurance is compulsory on all employed persons aged from 16 to 70, except those in the naval or military services of the crown, those in other employment under the crown or under local or other public authorities for whom adequate provision already exists, employees of railway companies and the like provided for by suitable benefits, teachers provided for under other acts, etc. Those affected by the exceptions are comparatively few, and may, in the discretion of the insurance commissioners, be transferred to the compulsory insurance scheme Persons who are not subject to the compulsory insurance may voluntarily insure if they are engaged in some regular occupation and are wholly or mainly dependent for their livelihood on their earnings in such occupation or have been insured persons for a period of five years or upward, no person may become a voluntary contributor whose annual income from all sources exceeds $778 64, that is, 160 pounds, unless he has been previously insured for a period of five years or upward There is no discrimination in respect of sex or of citizenship, but all insured persons must be residents of the United Kingdom

TABLE 2—AVERAGE NUMBER OF CASES OF SICKNESS FOR BOTH SEXES PER HUNDRED INSURED IN SICKNESS INSURANCE SOCIETIES 1888 1907 *

Sex	Communal	Local	Factory	Building	Guild	Mutual Aid	Independent State	Total
Men	27 3	37 5	44 7	58 3	34 4	37 3	31 2	38 0
Women	22.2	33 6	37 4	47 3	26 6	33 7	28 8	32 1

* Frankel and Dawson Workingmen s Insurance in Europe, Table 71

The standard rates of insurance are 14 cents for men and 12 cents for women This amount is made up of contributions from employer, employee and public funds, the amount paid by each depending on the insured person's rate of wages If this reaches or exceeds 60 8 cents per working day, the employer pays 6 1 cents, male employees pay 8 1, and female employees 6 1 cents per week, nothing being contributed from the public funds If the rate of wages falls between 49 and 61 cents a day, the employer pays for male employees 8 and for female employees 6 cents a week, and the employee, regardless of sex, pays 6 cents When the rate of wages is between 37 and 49 cents a day, the employer pays 10 cents per week for men and 8 cents for women the employee pays 2 cents and 2 cents is contributed from the public funds When the rate of wages does not exceed 37 cents a day the employer pays for men 12 and for women 10 cents a week, the employee pays nothing, and 2 cents a week is provided from the public funds These provisions relate only to employees of the age of 21 or upward Employers are authorized to make payments in behalf of their employees and to deduct the employees' contributions from any wages payable by them to such employees Contributions by voluntary contributors are made at rates fixed in accordance with a table prepared by the insurance commissioners, and are payable weekly or at other prescribed intervals by the contributors themselves No contributions shall be payable in behalf either of employed persons or of voluntary contributors after they have attained the age of 70 years

A central administrative body known as the insurance commissioners was created as a body corporate, with the power to appoint officers, inspectors, referees, etc., subject to the approval of the treasury An insurance committee was also constituted for every county and county borough, its membership consisting of not less than forty nor more than eighty persons, some of whom must be women These committees are authorized to subdivide the counties or boroughs into areas over which district insurance committees shall have supervision, and are required to make reports as to the health of insured persons and the conditions affecting the same within their respective counties and county boroughs, and also to disseminate information on matters relative to health, cooperating, if thought best, with local educational and other institutions Causes of excessive sickness may be inquired into at the instance of insurance commissioners or of an approved society or by an insurance committee, and where such excess is due to neglect or insanitary conditions the costs of any extra expense may be demanded from the persons chargeable with such neglect, and an inquiry may be made by a special appointee of the secretary of state or local government board to determine as to the facts in the case and the justice of such claim

The administration of the sickness, disablement and maternity benefits is committed, in the case of insured persons who are members of an approved society, such as friendly societies, trade unions, provident societies, etc., to the societies of which they are members, which societies are also charged with the duty of receiving contributions of their members in this behalf Medical and sanitary benefits are administered through the insurance committees described below This separation of the bodies administering the medical benefits from those administering the sick cash benefits has been the cause of serious administrative trouble Persons not members of an approved society may pay their contributions through the postoffice, the fund thus created being subject to the control of the insurance committees

There is a second part of compulsory insurance providing for benefit in cases of unemployment in certain trades The board of trade administers this portion of the act, and the list of trades may be extended by this board At present there are seven in number building, including the construction, alteration and demolition of buildings, construction of works, including railroads, docks, harbors, canals, etc., shipbuilding, mechanical engineering, including the manufacture of ordnance and firearms, iron founding, the construction of vehicles, sawmilling, and machine woodwork. Employers and workmen pay equal shares of a weekly contribution of 10 cents for this form of insurance While Parliament contributes annually a sum equal to one third of the total contributions received from employers and workmen during the year, in general the employer is expected to pay the contributions of both himself and his workman, deducting the workman's portion from wages payable to the latter

Applicants for benefits under this branch of the act must show they have been employed in an insured trade in each of not less than twenty-six separate calendar weeks in the preceding five years, that they are capable of working but unable to obtain suitable employment, and have not exhausted their right to benefits under this part of the act. Workmen are not required to accept employment in place of striking workmen, or at a lower rate of pay than is customary in their line of employment in their district. Where, however, the employment is lost by reason of a stoppage of work due to a trade dispute in the establishment in which the workman was employed, he can receive no benefits so long as such stoppage of work continues, unless he has during such stoppage become actively employed elsewhere in an insured trade. Workmen losing employment through misconduct, or voluntarily leaving employment without just cause may receive no benefits for a period of six weeks from the date of such loss of employment. The benefits payable in cases of unemployment begin after the first week of the period of unemployment, and are fixed at $1 70 per week unless some other rate is prescribed Employment benefits are not payable for more than fifteen weeks within a period of twelve months unless some other benefit period is prescribed, nor shall workers in general receive any unemployment benefit in excess of one week's benefit for every five contributions paid by them under the act

TABLE 3—PROPORTION OF CASES OF SICKNESS LASTING OVER THIRTEEN WEEKS, BY SEX *

Duration of Sickness	Per 100 Cases of Sickness Males	Females
From fourteen to twenty five weeks	3 5	5 7
Twenty six weeks and over	2 3	2 8

* Twenty Fourth Annual Report Commissioner of Labor, vol 1

Provision is made for the determination of claims and the arbitration of disputes in both branches of the act It was estimated that there were 14,000,000 insurable persons in the compulsory class and approximately an additional 2,000,000 who could become voluntary members According to the Fabian Society report, only about 21,200 did actually in the first two years become voluntary members

The approved *societies mentioned* here are the various friendly societies equivalent to our fraternal societies and trade unions, provident societies and lodges, which had been giving sick benefit and insurance in England for so many years, and also specially approved societies of the Prudential Insurance Company called *into* existence to care for persons already insured in this company These societies differed from the German approved societies in that they were not necessarily confined to any locality or trade, but their membership was scattered through many trades all over the kingdom Some *contained women and men, some had lodges* of women and men separately, most were probably confined to men alone All these societies were actuarially independent

These approved societies[5] operating in 1914 in England ranged in size from the great centralized societies and the *great affiliated orders with many hundreds of thousands of* members down to the small village or local clubs whose membership in some cases did not exceed 100 Every conceivable variety or type of administration seems to be allowed Some societies are centralized both as to control and as to finance, some permit their lodges to control the funds, and some have a central body supervising and equalizing the funds that are managed by the local lodges This last method has given the best results The trade union societies are composed usually of workers engaged in one occupation or a number of allied occupations, and therefore the risk of the industry is relatively evenly distributed and constant In some of the big friendly societies, all trades are mingled together in one lodge and the uneven hazard of the various trades causes serious actuarial difficulties in the administration This lack of homogeneity in many of the societies and local lodges, the scattering of the membership of the societies all over the United Kingdom, has proved to be a real defect in the English law

ADMINISTRATION AND EXTENT OF BENEFITS

Sickness insurance, as is pointed out by Rubinow, is primarily a matter for local administration Political exigencies forced the British government to accept the friendly societies as approved societies, because it is doubtful if any bill could have passed against the opposition of five or six million members *of these friendly* societies, one result being the establishment of approved societies of private industrial life insurance companies the membership of which exceeds 4,000,000 It is doubtful *if this* use of the private industrial casualty companies was *contemplated* or expected in England Germany, *on the other hand, used the same* established funds and societies, but insisted on their localization either by trade establishment or geographic distribution The great advantage of localization is that the administration of benefits—both medical and cash benefits—is greatly simplified The establishment fund *is* less desirable because of the predominating importance of one employer and the financial danger which may develop out of one localized epidemic

Considering the benefits given in the various countries under the sickness funds, Austria insists that the benefits provided by a sick fund *must not be less* than the following From the beginning of a sickness free *medical* treatment, as well as free medicines and therapeutic appliances, as eye glasses, crutches, etc Medical treatment *includes* lying-in treatment. In case the sickness lasts *more than* three days and the sick person is unable to work, *he shall receive* a cash benefit equal in amount to 60 per cent of the current wages for ordinary day labor in that district, this cash benefit to be paid for a period of twenty weeks In cases of normal childbirth, sick benefit *is* to be paid for at least four weeks after delivery In case of death, the heirs shall be paid a funeral benefit not less than twenty times the rate of wages for ordinary day labor, as above The benefit is paid if the death occurs after the twenty weeks, provided the sick person has retained his membership in the sick fund by continuing payment of dues, *and if the* disability is caused by an accident covered by the *accident* insurance laws, the funeral benefits may be claimed both from the sick fund and from the accident insurance institution This rate of wages is revised from time to time, and under both sexes is rated as for adults and for young persons, that is, 16 years of age or younger Apprentices are rated as *young persons*

Hospital treatment may be given at the expense of the sick fund with the consent of the sick person, if the latter is living with wife or husband or with other member of the family in the household, or otherwise receiving home care, without the consent of the sick person when the nature of the sickness requires special treatment, in other cases regardless of whether the sick person consents thereto If a person placed in a hospital has dependents on him, the sick fund must provide the dependents with at least half the sick benefit. The sick funds are expressly prohibited from engaging in invalidity insurance or the insurance of widows and orphans

No sick fund can use as a basis for computing a sick benefit an average rate of wages lower than the official rate or higher *than 81 cents per day*, the sick benefit cannot exceed 25 per cent *of the* wage rate used as a basis for computation, and the benefits cannot be paid for more than a year, and the funeral benefit cannot exceed $20 30

The workmen and physicians have advocated free choice of physicians on the part of sick persons, but the funds have insisted on retaining the system of a corps of fund physicians, to any one of whom the sick person may apply for treatment. The compensation of the physician who is under contract with the fund is in the form of a fixed salary or in the form of a salary varying with the membership of the fund, although occasionally in the form of a fee for services in each individual case In rural districts where there is a scarcity of medical practitioners, there are other *systems of payment in vogue* Any expense which *may be caused through the treatment of a member by any other than a fund physician will* be reimbursed by the district sick fund only if the treatment has taken place at its order or by direction of the board of directors in case of emergency

In Germany the sickness insurance includes the first thirteen weeks of accident insurance Such accident must have taken place in the course of the employment, it must have befallen an insured person, and the death must have a causal connection with the industrial accident The term "sickness" is defined to be an abnormal condition of health to remove which *necessitates medical attendance and medicine* The period of convalescence following a sickness is not properly sickness, but when there is a recurrence of sickness during the convalescence, the disabled person becomes entitled to relief Thus the sickness insurance in the first thirteen weeks provides benefits for both the disability of sickness and accident As a measure of administrative convenience, maternity benefits paid in case of normal childbirth are provided for by the sick funds, in other words, maternity insurance has been combined with sickness insurance If childbirth is not *normal,* it is a basis of claim to the regular sick benefits The cost of burial of insured persons is defrayed by the funds, but not by the communal benefits

The minimum benefits provided by the sickness insurance *system consists* of medical attendance, medicines and therapeutic supplies, and from the date the sickness or disability begins, regardless of whether it causes inability *to continue* working If the sickness or disability prevents the insured workman from continuing work, he must be granted a pecuniary benefit which must not be less than *half the rate* of wages paid in the locality for ordinary unskilled *day* labor, this benefit to be paid for disability of not *less than* twenty-six weeks and not more than fifty-two A pecuniary benefit of the same amount is paid for six weeks after the date of confinement to a female insured person in case of childbirth, and funeral benefit of *twenty* times the rate of wages in computing the benefit, but not less than $11 90 *A person* included *in* both the sickness and accident insurance, who is disabled by industrial accident, receives sickness insurance for thirteen weeks and in addition receives, at the beginning of the fifth week, the accident benefit If, at the end of thirteen weeks, the disabled person has not recovered, the accident insurance or other associations then provide the regular accident benefits A person included in both sickness and invalidity insurance, who is disabled by sickness, receives the regular sick benefit for a period of twenty-six weeks If he has not recovered at that time, the invalidity insurance institutes then provide the regular invalidity benefits If there is good reason to believe that by special courses of treatment a person disabled either by industrial accident or disease, causing extended invalidity, can be restored to health, then the agencies conducting the invalidity insurance are authorized to relieve the sick fund of the care of the disabled person and provide the treatment at their expense, or they may authorize the sick fund to provide such treatment at their expense A pecuniary benefit, but not the medical benefits, may be refused by the sick funds if the disabled person has purposely caused the sickness or accident, or if the disability results from rowdyism or similar misconduct, or results from intoxication

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[5] Report of Departmental Committee on Sickness Benefit Claims Under National Insurance Act, 1914

The services of physicians are to be provided in accordance with the regulations established by each fund The usual plan is for the fund to make contracts with a number of physicians who give their services in return for an annual sum fixed in advance or for a specified sum per patient also fixed in advance That is, in Dresden the physicians are under stated salaries, or, as in Leipzig, there may be a capitation fund of a stated amount divided according to services rendered to each patient, each medical service rendered counting so many points, that is, a day visit one point, a night visit two points, etc. In no instance is a charge fixed on the number of visits or number of prescriptions Many of the sick funds, as in Leipzig, make contracts with a large number of physicians, and the insured persons may choose among them In Leipzig the fund employs the services of 80 per cent. of all physicians in the city, while other funds, in order to secure through competition low rates of fees from physicians, provide only the services of a limited number of physicians The competition among physicians to secure the position of medical officer has reduced the cost to funds to a very low level, but on the other hand it has caused intense quarrels between physicians and the funds Such disputes were discussed last year in the case of the Leipzig and Cologne societies The determination on the part of the sickness funds to control the physicians and the resentment on the part of the physicians to such control is shown in the number of disputes that continually arise Up to 1911 in some 1,020 disputes, 961 have been decided in favor of the physicians There is no question that some control, either medical or lay, must be exerted over the carrying out of any insurance scheme It is also unfortunately a fact that a small percentage of all professions is dishonest and such dishonesty must be controlled

In Leipzig the control of the medical service is brought about through the following committees* a representative medical committee of the society doctors, a conciliation committee and an arbitration committee The representative medical committee of the society doctors consists of twelve members chosen every two years by the doctors in the service of the society, four deputy members being elected at the same time to take the place of members who cease to hold office. A quorum of the committee consists of the chairman or vice chairman and not less than six members Clerical work is provided for by the society if required by the committee The duties of the committee relate primarily to the constant supervision and control of the society doctors, also to calculating and dividing the remuneration of the doctors and to the maintenance of their rights and interests The committee controls all the accounts of the doctors after they have been checked so far as the figures are concerned at the office of the society The committee sees that the charges are right and reasonable, amounts in excess of what should be charged are deducted, and it supervises the prescriptions of the doctors for drugs and other medical and surgical requirements, medicinal baths, etc. After audit of the figures and statistics of the society, the committee judges whether or not the prescriptions are economical, whether they are within the limits fixed, and whether proper provision is made for reuse of bottles, etc The committee objects to the use of secret remedies, and deducts from the remuneration of the doctor for the benefit of the society, the amount of charges which should not have been incurred

The committee supervises the number of persons certified by each doctor as unable to work and the length of time of the inability, according to statistics prepared by the society The committee determines whether there has been an improper excess of the normal average In case of serious default, such as wrongly certifying patients as unable to work, the society deducts from the remuneration of the doctor, for the benefit of the society, the excess charges incurred The committee communicates semiannually to all society doctors the results of the statistics prepared to which reference has been made above If the committee finds that a doctor has been seriously at fault in the foregoing matters, it may take one of the following actions, in addition to making the deductions from the doctor's remuneration give advice or written warning, after two unheeded warnings, temporary suspension for from one to twelve months from attendance on society patients Before giving warning of suspension, the doctor concerned must be heard If a doctor has been twice temporarily excluded from the society practice without result, and if the society does not give the doctor notice to terminate his contract, the committee may make a request to the Arbitration Committee that the doctor be permanently excluded from society practice Complaints made by a patient or by the society with regard to the practice of a doctor are to be brought before the Representative Medical Committee for its opinion The opinion on the case is to be communicated to the doctor by the committee The rights of the society with regard to giving notice to terminate a contract are not affected by any action under this provision The society has to prepare for the committee all the information necessary for the duties imposed on it by the foregoing rules Circulars and directions which the society proposes to issue to its doctors are first to be submitted to this committee for its information Complaints by the doctor against the society have first to be submitted to the committee which gives an opinion to the doctor on the complaint Complaints by doctors of members of the society have to be communicated to the committee only if the managing committee of the society does not give satisfaction to the doctor in regard to the complaints

The Conciliation Committee is appointed for deliberation on questions which appear to require consultation between the society and its doctors, and for the friendly consideration of all kinds of differences This committee consists of two chairmen, two deputy chairmen and one member each, to be chosen for a year, of the managing committee of the sickness society and of the Representative Medical Committee The deputy chairmen act as deputies for the chairmen Persons specially appointed for the purpose, and for the same term of office, shall act as deputies for the deputy chairmen and for the other members Either one of the two chairmen may call a meeting of the committee Resolutions are valid only if all six members or their respective deputies are present and if at least four votes are cast for them

The Arbitration Committee is composed of nine members The chairman of the managing committee of the sickness society, the deputy chairman, and one other member of the managing committee chosen by the committee for a year, are the members of the Arbitration Committee. Three other members of the managing committee are chosen in case any of the other three are prevented from doing so The chairman of the District Medical Association of Leipzig Town, the District Medical Association of Leipzig Rural District and the Representative Medical Committee are also members of the committee, and each of these are represented by his deputy chairman if the chairman is prevented from acting To these six representatives of the society and of the doctors are added two members of the royal district government, and the medical councilor of that authority for the district. The material expenses of the Arbitration Committee are borne by the doctor whose appeal is being considered if his appeal is not upheld, if his appeal is upheld, by the two doctors' associations and by the society in equal shares

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* Gibbon Medical Benefit in Germany and Denmark.

The Arbitration Committee meets on the invitation of the local royal insurance authorities on their premises A member of this local insurance office is chairman Five members are a quorum and resolutions are valid if passed by a majority If the votes are equal, the chairman shall have a casting vote The Arbitration Committee decides definitely on matters referred to it in accordance with the agreement of Dec 31, 1910, or in accordance with individual agreements made with the doctors, or on such matters as may in future be referred to it, also on appeals against measures taken by the Representative Medical Committee, also, on any proposal for permanent exclusion of a doctor, or for any change of the present stipulations The committee also decides definitely on the interpretation of the various provisions of the agreement or agreements with the individual doctors, or of these conditions The ordinary courts of law decide disputes which may arise in regard to remuneration and claims of those doctors who are employed at fixed salaries These agreements are to remain in force until the end of 1916 and then continue in force for another year, unless a written notice to terminate the agreement is given by the society or by the district medical association, and the notice must be submitted to the Arbitration Committee for an expression of its opinion The Arbitration Committee may decide to make its decisions public, but not decisions which touch the failure of duty or other personal circumstances of a doctor, or which, if published, would touch the interests of a third person All appeals to the Arbitration Committee, to prevent their being excluded, are to be made to the chairman of the committee within four weeks after the decision against which appeal is made has been communicated to the doctor

LEIPZIG REGULATIONS

The following extracts from the regulations relating to the medical practitioners of the District Sickness Society of Leipzig are given as being useful for reference in compiling such regulations[6]

The Representative Medical Committee has to take notice, not only of contraventions of the terms of the agreement itself, but also of the regulations relating to doctors

Medical Treatment—If it is not clear from the membership book that the insurance contributions have been made in respect of the person up to the date on which medical assistance is sought, or if the receipted membership book cannot be produced, the doctor shall give to the person requesting treatment such primary treatment as may be necessary, if there is any danger in delay, but any further treatment, especially the giving of a prescription or a sickness book, shall be expressly contingent on the production of receipts in the membership book

The treating doctor shall enter in the sickness card of the membership book the date of every first consultation, and, if possible, the date of every last consultation (or visit) Medical attendants at polyclinics shall do likewise

Change of Doctor—Patients may change their doctor in the course of an illness only with the consent of the society The society shall not exercise any influence in the choice of doctor, and, if a change of doctor is approved, shall at once inform the doctor changed, with a statement of the reasons for the approval, according to the provisions of these regulations The sending of a patient by one doctor to another society doctor does not require the approval of the society, but the change must be noted in the membership book and, if the patient is unable to follow his employment, in the sickness book

The following rules shall apply to the granting or refusal of approval of a change of doctor

1 Approval shall be given to the change of doctor by a member or dependent

(*a*) If the society doctor refuses to continue the treatment of a patient and does not send him to another doctor, or if the patient does not wish to go to a proposed doctor

(*b*) If the patient cannot be required to retain the same doctor because of the change of address of the doctor or of the patient, or of a change in the consultation hours

(*c*) If the doctor who has given the first attendance in the case of an illness resides so far away, or his consultation hours are so inconvenient that there would be undue difficulties to the patient in being attended by him

(*d*) If the contemplated change is from a general practitioner to a specialist, or from a specialist to a general practitioner

(*e*) If change of treatment is contemplated, more particularly when the doctor advises a course of treatment or an operation which the patient rejects

(*f*) If the deputy of the treating doctor does not possess the confidence of the patient

(*g*) If the treatment has continued for a long time without apparent result (to give ease of mind to the patient)

2 In addition, change of doctor shall be approved in the case of members who continue at work and of dependents

(*a*) In case of differences between the doctor and the patient (in order to prevent further difficulties)

(*b*) In all other cases in which the foregoing conditions seem to exist (In doubtful cases, the approval shall only be given after inquiry has been made of the treating doctor, and, in suitable circumstances, also only after a certificate has been obtained from a confidential medical adviser)

3 Approval to change of doctor shall be refused

(*a*) If the patient is not satisfied with the prescriptions of the doctor, or if he desires particular drugs or other means of cure.

(*b*) If the patient has made improper proposals to the doctor

(*c*) In the absence of any adequate reasons

4 In addition, approval to change of doctor shall be refused in the case of members who cannot follow their employments

(*a*) If there is suspicion of malingering

(*b*) While examination by a confidential medical adviser is pending

(*c*) In case of dispute with the doctor as regards inability to follow employment (In these cases the patient shall be speedily examined by a confidential medical adviser The result of the examination shall be immediately communicated to the treating doctor If the result agrees with the diagnosis of the latter, the refusal to a change of doctor shall hold good Otherwise approval is to be given to the change)

The following cases are not considered to constitute a change of doctor and do not require approval

(*a*) If at the commencement of an illness, notwithstanding repeated requests, the doctor does not attend and the patient goes on to another doctor

(*b*) If a patient, in consequence of a sudden change in his condition and inability to obtain readily the services of the treating doctor, obtains the services, for the time, of another doctor

(*c*) If a doctor discharges a patient from his care as cured and the latter still considers himself ill (If a patient in such a case is certified as unable to follow his employment by the new doctor, he shall forthwith after receipt of his sickness book be examined by a confidential medical adviser

The Sending of Patients to Hospital—The doctor shall send sick members to hospitals, etc., (even against the will of the member in the circumstances set out in Section 12, Part 3, of the rules of the society) in cases of

1 Illnesses which require long surgical attention or serious operations

2 Illnesses of all kinds when, because of the conditions of the dwelling place and the like, treatment in a hospital is desirable

3 Infectious venereal diseases, especially if the patient is unable to follow his employment

4 Enteric fever, cholera, smallpox, scarlet fever, diphtheria, epidemic cerebrospinal fever

5 Suspicion of malingering

6 Request of the managing committee of the society

Members who, according to Section 12, Part 3, of the rules of the society, have the right to refuse hospital treatment may be treated in their homes, after the advantages of hospital treatment have been repeatedly brought to their notice Since patients who have not the right to refuse hospital treatment lose their claim to money benefit in case of refusal, the doctor must forthwith report to the society any such case of refusal

Members who are declared able to follow their employment but who assert that they are still unable to do so are as a rule to be sent to hospital for observation if they so desire

Request for reception into a hospital has to be made as a rule to the administration of the society As an exception members may be sent directly to a hospital when there is danger in delay as at times when the offices of the society are closed The necessity for conveying the patient by ambulance or carriage is to be indicated on the certificate

Dependents of members cannot compulsorily be sent to a hospital, but, in circumstances such as those mentioned above the doctor shall also in these cases endeavor to persuade such patients to go to a hospital

When patients are recommended to go to a private clinic, they shall be informed that treatment in a public institution is without charge to them, but that they have, as a rule, to pay (in part) for treatment in a private institution

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[6] Gibbon Medical Benefit in Germany and Denmark.

Certification of Inability to Follow Employment—Care is to be exercised in determining the first day when the patient is able to resume work, and, in doing this, account is not to be taken of the first day of the week, but the first day shall be certified which succeeds the last day of inability to follow employment, even when the day is a Sunday or a holiday

Sickness Book— If there is any suspicion of malingering, the patient shall as a rule not be allowed to go out, at least not beyond the visiting of the doctor during his consultation times, in suitable cases, the patient is to be ordered to remain in bed

In recording diagnosis, general indications are to be avoided as much as possible—for example, recording simply lead poisoning, nervous disease, stomach trouble, throat trouble, kidney disease, abdominal complaint, venereal disease Occupational accidents are to be indicated as such

During the continuance of inability to work, the doctor shall give to the patient, after examination, a certificate of sickness at the end of every week as a rule not before Friday

Control Inquiries—The time and place of the control inquiries respecting patients unable to follow their employment will be communicated to the treating doctor beforehand, and it is permitted to him to attend If he, the treating doctor, does not agree with the results of the inquiry and is not satisfied with the action taken by the society, he shall inform the latter of the grounds of his objections If an agreement cannot be reached between the confidential medical adviser and the treating doctor, the patient shall be sent by the society to a medical arbitrator, whose decision shall be final These arbitrators shall be annually appointed by the committee of the society in agreement with the Representative Medical Committee, and an arbitrator and a deputy shall be appointed for each specialty in which question may arise

The services of the arbitrator may also be requisitioned by the society in cases in which a member who has been certified able to work strongly declares his inability, and this notwithstanding that the treating doctor and the confidential medical adviser agree on the case.

ADDITIONAL BENEFITS

The insurance of dependents mentioned here ranks among the additional benefits for which the law provides A sickness fund desiring so to extend insurance must adopt a rule to that effect which may provide for the granting of family benefits generally or only to those members who especially apply Where sickness funds provide family benefits, they either pay the doctor an inclusive fee for his attendance on family and dependents, if any, or separate fees for members and families The former method of payment appears to be the more common, and the effect of this arrangement is that the accounts of sickness funds seldom afford any indication as to the actual cost to members of attendance on dependents The medical benefits to dependents are limited in some instances to ordinary attendance, in others, drugs are given in addition, and some even give appliances The benefits are given, however, for thirteen weeks only instead of twenty-six applicable to members Sometimes hospital treatment is given or a contribution is made toward its cost.

Family insurance seems to be common in Leipzig, Stuttgart and Dresden but rare in Berlin Of twenty local sickness funds for large towns, twelve give and eight do not give family benefits Of twenty-three important factory funds, each having over 1,000 members, eleven give and twelve do not give this benefit. The foregoing twenty local sickness funds had, in 1911, an aggregate membership of 1,218 048, those with family benefit having 740,000 members, or 60.8 per cent., of the whole, and those without family benefit having 337,000 members, or 22.9 per cent., of the whole The factory funds had an aggregate membership of 140,223, those with family benefit having 86 636 or 61.8 per cent of the whole, and those without family benefit having 53,517, or 38.2 per cent., of the whole Combining the two groups of funds, 60.9 per cent. of their members received family benefit and 39 1 per cent. did not. This is too small a number from which to draw any general conclusions as to the extent to which family benefits are given throughout Germany, but are given as types

The amount of medical attendance necessary where family insurance is provided is probably determined more by the definition of the term "dependents" than by the duration of medical benefits Every sickness fund defines this term for itself For instance, in Bremen the following dependents are given the foregoing insurance wife or husband and children, including adopted children, in Dresden, wife or husband, and children and stepchildren under 15 years, in Leipzig, wife or husband, parents, grandparents, parents-in-law and children under 16 years, in Stuttgart, wife and children under 14 years, in Remscheid, wife or husband or relative in charge of household, children and foster children, parents and parents-in-law, and in the case of unmarried members having their own households, the mother or sister in charge, in Essen (Krupp), wife, children and other relatives of member by blood or marriage resident with him and wholly or mainly dependent on his earnings, but not a housekeeper or a servant.

An estimate of the cost of medical attendance per head on members and dependents together can be made, but no accurate data are available to separate the difference between the dependents and the members where such additional benefits are given The data[7] available, however, seem to justify the assumption that one third of the members of the large federations of sickness funds, formed for miscellaneous trades and occupations, are married, and that three dependents per household is not an excessive average On this basis of computation where a sickness fund provides family insurance, any given number of members would double that number entitled to medical attendance Applying this numerical test it is possible to form an approximate idea of the cost of attendance per person entitled to it In 1911 the federation of local sickness funds at Leipzig, Dresden and Stuttgart, with an aggregate membership of 412,000, paid $1 82 per member for general treatment by general practitioners and specialists, exclusive of dental treatment. Counting one dependent extra for every member, this would be equal to about 91 cents per individual entitled to attendance On the other hand, eight other important sickness funds dealt with in this report paid separate fees for attendance on dependants, the mean rate being $2 06 per family exclusive of the insured head Assuming an average of three dependents per family, the cost per individual would be 68 cents

There is considerable variation in the cost of medical attendance in Germany between sickness funds of the same type and also those of different localities In Berlin, where attendance to members only is provided, the cost of attendance by general practitioners and specialists, dental treatment being excluded, ranges from 91 cents to $1 15 a head, and the mean rate expenditure on this point of six important funds is $1 08 per head In other parts of the country the cost of similar attendance for members only ranges from $1 095 in the case of the Frankfort-on-the-Main Federation of Sickness Funds to $1 43 in the case of the Munich federation and $1 44 in the case of that at Düsseldorf Similarly, the cost of ordinary medical attendance where dependents are treated ranges from $1 40 per member in Dresden, where the system of district doctors with fixed salaries prevails, to $2 065 per member in Leipzig where the doctors are engaged on the organized free choice principle.

The data available indicate that the extension of medical treatment to dependents greatly swells the drug bill. In Leipzig of a total payment for drugs and dressings 39.5 per cent was incurred on behalf of dependents, in Stuttgart, 43 per cent. on account of dependents

REMUNERATION OF PHYSICIANS

In considering the methods of remuneration of physicians which had been adopted under the German sickness insurance law it has to be remembered that the practitioner does not dispense his own prescription but refers his patients to the pharmacist of his choice Another thing to remember is the existence of official scales of medical, surgical and dental fees for use in the absence of agreements for fixing a minimum and maximum charge, as a rule within a very large range The government of each state has the right to use an independent scale of charges, and while the larger states—as Prussia, Bavaria, Wurttemberg, Saxony and Baden—have their own scales, many of the smaller states adopt the scale of Prussia In some towns the doctors, when organized, agree to the modification of the official scale, but they cannot increase the minimum fees The law requires that these minimum fees must be charged to workmen's sickness insurance funds, poor law administrations and poor persons

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[7] National Health Insurance Cd 6 81

Each sickness fund has an entirely free hand in the method of remunerating the physicians The law does not set the amount of payment, although in the absence of formal agreement with the physicians it follows that payment will be by attendance according to the minimum fees of the official scale The adoption of this scale as the basis for payment or for the division of the medical remuneration fund is one of the demands on which the medical profession, as organized on the Leipzig basis, is most insistent In few towns is the *system of medical remuneration uniform* Owing to the multiplicity and diversity of the sickness insurance societies, each independent and free to make its own arrangements with the physicians, various systems exist side by side Whatever the method on which the physicians are paid, no restriction is made on private practice, and if physicians devote their whole time to attending members of the sickness funds, and this is often the case, it is done voluntarily

The various methods of remuneration are as follows Payment by attendance, under this system the fees charged are as a rule the minima of the official scale, though in some cases a reduction is made on these minima in the case of often recurring services, or, again, an agreed reduction varying from 10 to 20 per cent may be allowed on all official minimum fees alike Here the position of insured persons is exactly like that of private patients The only large federation of sickness societies known to pay its medical staff unconditionally on this principle, though there may be others, is that of Bremen with a membership of about 30,000 On the other hand, the unattached factory and trade guild funds of the town very commonly pay the physicians on this principle In the rural districts the plan of payment by attendance is common and often found to be a condition of efficient medical service or any service at all In Stuttgart the factory and guild funds, as a rule, pay for all attendances at the minimum rates less a deduction of 20 per cent and this is the case with many of these funds in Munich In Leipzig the reduction is usually 5 or 10 per cent

The sickness fund federation in Bremen serves for all trades and occupations and includes also most municipal work people Voluntary arrangements are made for the treatment of dependents, 3,000 members paid special contributions for family treatment in 1911 All services of general practitioners are paid for separately, according to the schedule of fees embodied in the agreement with them Specialists are not paid by agreement The average inclusive cost of medical attendance for members only, in 1911, was $1 522, made up of $1 004 for general practitioners, 31 4 cents for specialists and 20 4 cents for dentists, etc The cost of medicines and appliances for members only was 97 6 cents a head, and hospital treatment cost $1 474 a head Although there are striking exceptions, it is found that sickness funds which pay the physicians by attendance without the common device of a pooled capitation payment, limiting their liability in advance, have to spend more on medical treatment than those which stipulate for this protection Where in Munich sickness funds pay for medical attendance according to the minimum rates of the official scale, the cost per member usually ranges from $2 to $2 50 per annum, where the system of remuneration is a pooled capitation payment plus fees for special services, the cost usually ranges from $1 43 to $1 87 per member, and where the capitation fee includes all services, the usual cost is $1 50 per member

In other towns it was possible to compare the experience of funds which under pressure had changed the method of a pooled capitation payment for that of payment according to attendance without limit In the case of a large factory fund the effect was an increase in the cost of medical treatment from $2 33 per member, including attendance on dependents, on the average of the years 1906-1908 to $3 95 on the average of 1909-1911 The cost of medicine and appliances also increased from an average of $1 31 to $1 44 per member, while the cost of hospital treatment remained unchanged Conversely, a fund which sometime ago commuted its payment for special services into a fixed annual sum finds that by so doing it has prevented an increase of 40 per cent in that item

CAPITATION FEES TO THE INDIVIDUAL PHYSICIAN

Under this system each physician engaged receives a fixed fee per head per year in respect of all insured persons whom he undertakes to attend, with or without certain special services according to the terms of the agreement If there be a choice of physician, it is made at the beginning of each year This is the method of remuneration adopted by the miners' societies in Prussia and by some of the railroad employees It also occurs in many factory funds The specialists were paid $1 62 or $2 50 for the treatment during six months, if necessary, of each case referred to *them by* a general practitioner, the lower fee being paid to oculists and the higher to the specialists for ear, nose, throat and genito-urinary diseases Surgeon dentists are paid $1.25 per case, this fee covering six months' treatment if necessary Each general practitioner is appointed to a district, and capitation fees are paid to him for all the insured miners in the district

In Cologne the State Railroad Board pays the physicians on the same system The physicians are appointed for fixed districts In the towns of the district the insured persons have free choice, in the rural districts they call in the nearest physician The general practitioners are paid as a rule $1 each for single members, with modifications according to local circumstances, for married members $1 75, with additional fees of $3 50 for confinements, night visits $1 99, night consultations 50 cents, and for assistance to other physicians and attendance on members of other sickness funds A physician also receives a free ticket entitling him to travel second class by all trains within his district Specialists are paid the minimum fees of the Prussian official scale

Capitation *payments into a pooled fund, with or without extra* fees, for prescribed reserved services is another system The pooled fund is divided among the physicians according to the services performed, and the extra fees are paid to the physicians who have earned them In some cases special fees are deducted from the pool before it is divided The physicians usually are paid quarterly, the capitation fees being based on the monthly average membership figure reckoned for each quarter separately This method is the most frequently adopted From the point of view of the sickness funds it has the advantage that liabilities can be estimated in advance within narrow limits from year to year and their budget arranged From the standpoint of the physicians, remuneration is proportionate to services performed The extra services most commonly paid for are obstetric services, night and urgent visits, attendance on members of other sickness insurance funds, and sometimes mileage allowances are added to these extra services Where a sickness fund pays for operations outside the pool, it is usually stipulated that extra charges *shall be paid only for services* carrying minimum fees in excess of 75 cents or $1, according to the official scale

The Munich Federation of Sickness Funds with a membership in 1911 of 136,477, which does not provide family benefits, pays a capitation fee of $1 06 and in addition pays for all operations carrying fees from 75 cents upward, according to the official minimum rates These special fees are laid down in an exhaustive schedule and are in some cases *below the* official minimum The total cost in 1911 of all medical attendance, including dental treatment, massage, etc, was $1 658 per member The Stuttgart Federation of Sickness Funds, with an average membership in 1911 of 89,777, which provides attendance to all dependents, pays capitation fees of $1 072 and $1 25 for single members and $2 68 *to* $3 75 for married members, these fees being pooled, and extra fees to the physicians earning them for operations and certain special services But all operations carrying a fee in excess of $3 75 are performed in the municipal hospitals The total cost of medical attendance cannot be separated as between members and dependents, but togther it averaged, in 1911, $2 41 per member

The Essen Federation of Local Sickness Funds, with an average membership of 27,158 in 1911, though paying nominally under a pooled capitation fee arrangement, guarantees to the physicians remuneration equal to 90 per cent of the value of their individual services based on the rate of 25 cents for a consultation and 37 cents for a visit The pooled capitation payment is now 87 cents in respect of general practitioners and 7.2 cents in respect of specialists, or together 94.2 cents with $1 87 extra where attendance is given to dependents, family insurance being voluntary The total cost of medical treatment, including 1,300 families, was $1.29 a head, the cost of medicine and appliances 85 cents, and the cost of hospital and other institutional treatment $2 22

In Düsseldorf the capitation payment is based every year on the average value of the services performed during the three preceding years when charged according to an agreed scale of fees On this sliding scale of payment, the capitation payment ranges from $1 50 to $1 62 without family attendance

PAYMENT PER CASE OF SICKNESS ATTENDED

This is an uncommon method of remuneration, adopted under special conditions which make the other methods inapplicable, though pooled funds are often divided on this principle. The Frankfort Federated Sickness Funds use this method in treating their members in the rural districts The fee in this case is $1.25 per case of sickness subject to the conditions that for this fee a patient must be attended for twenty-six weeks if necessary, and that three cases of sickness at the most may be charged for in one year in respect of the same member Specialists also are paid by this method, for example, the specialists who attend the members of the General Miners' Sickness Fund at Bochum in Westphalia The Bochum Sickness Fund formerly paid specialists $2.50 per case attended, but at present pays by a pooled capitation system of 7.2 cents per member, being the ratio per member set aside by the fund for this payment

Payment by fixed salaries is an unusual method of payment, although adopted by some sickness funds and by some of the miners' funds The Dresden Federation of Sickness Funds is the best known example of this, which had an average membership in 1911 of 127,938 and which gives medical attendance, without medicine or appliances, and partial hospital treatment to dependents The area served by the Dresden fund is divided into 160 districts of unequal extent, and a physician is assigned to each district The insured persons in a given district are expected to consult the physician in that district. In case of dissatisfaction, their wishes are considered as far as possible. All appointed physicians, as a matter of fact, engage in private practice. Salaries range from $1,250 a year to $150 The only extra payments are fees for night visits in special cases of 75 cents and mileage in the case of rural physicians, and also all dressings and drugs needed by the physicians as distinguished from those prescribed

In the beginning of 1912 there were 109 town physicians engaged by this federation fifty-four country doctors, sixty-five specialists, with two whole-time confidential or certifying physicians The salary of town physicians in 1911 averaged $939, the country physicians $377 75, and the specialists $754.25 The total cost of medical attendance, including attendance on dependents, averaged $1 592 per member, the cost of medicine and appliances as supplied to members only $1 106, and the cost of hospital and institutional treatment, only partially given to dependents, $1.322 Some towns vary the Dresden system by guaranteeing the physicians appointed a minimum salary with an addition depending on the number of their services

The plan of employing whole time physicians at fixed salaries has been adopted at different times and places, but only experimentally At Remscheid, in Prussia, it was tried from 1898 to October, 1905 Six physicians were appointed to attend about 10 000 members and their families, but the number was later increased to eight. These physicians were paid fixed salaries of $1 500 increasing to $1 750, except an eye and ear specialist, who received $1,750 increasing to $2 000 Each physician had an assigned district but in case of excessive work a physician could assign to a colleague During the time this method of appointing and remunerating physicians was in force the cost of medical attendance, including attendance on dependents as stated ranged from $1 436 to $1 814 per member During 1905 the system of limited free choice of physicians was introduced with payment out of a pooled fund according to the number of cases attended In Table 4 is given the cost of attendance for members and dependents from 1896

In medical benefit associations in several towns—Berlin, Munich and Cologne, for instance—groups of sickness funds have established associations for the provision of medical attendance, with or without medicine and appliances, independently of the other benefits secured to insured persons by statute, leaving these other benefits to be administered by the affiliated funds in the usual way An old established association of this kind in Berlin, comprising forty-eight sickness funds with an aggregate of 191,000 members, administers all the statutory medical benefits on behalf of the affiliated funds, but while it concludes agreements with and pays the physicians, the cost of medicine and hospital treatment is paid direct by the funds concerned Attendance on dependents is not provided The city and suburbs are divided into medical districts, and at least one physician is appointed for each at a fixed salary In 1912 the number of physicians was 200, of whom 160 were general practitioners and 40 specialists All members are free to consult any physician on the list, but if visits are desired, a physician of the neighborhood must be called in The affiliated sickness funds paid to the association for medical attendance 93 cents for each member, and the physicians received on an average a salary of $750 The physicians were free to attend members of other sickness funds

A somewhat similar association in Munich undertakes to provide medical attendance for twenty-six weeks, exclusive of medicine and hospital treatment, on behalf of a number of factory and other sickness funds It deals with a membership of 26,000, with about 44,000 dependents, $1 31 a head is paid for individual members, and $2 75 for dependents, wife and children, with no extra payments for operations The physicians are paid by a pooled capitation system according to the services they perform Office visits are reckoned as worth 18 cents, house visits at 50 cents, and operations according to the Munich schedule of medical fees In the early days of compulsory insurance in Germany, some of the largest funds were able to obtain medical attendance at a cost of 25 cents a head In 1891, when the Berlin free choice association of physicians was formed, the average cost was 39 cents per member The largest of the Berlin sickness funds, that for commercial employees, working under a system of district physicians, did not for several years pay more than 25 cents per head for medical service, in 1894 it was paying 75 cents, from 1902 to 1909 the pooled capitation fee was 81 cents with fees for a few special services although in the meantime the duration of treatment had been doubled, and in 1912 the capitation fee was $1, and, exclusive of dental treatment and massage, in 1911 the total cost of medical treatment was $1 074 per member

TABLE 4 —COST OF ATTENDANCE FOR MEMBERS AND DEPENDENTS

Year	Amount	Method
1896	$1 048	Limited number of physicians paid by pooled capitation fee, plus extra fees
1897	1 422	
1898	1 44	
1899	$1 52	Whole-time physicians, paid fixed salaries
1900	1 546	
1901	1 446	
1902	1 476	
1903	1 388	
1904	1 658	
1905	1 814	
1906	$1 93	Free choice among all organized physicians and payment by case from pooled fund with special fees
1907	1 956	
1908	1 926	
1909	1 968	
1910	1 966	
1911	2 02	

SCOPE OF TREATMENT

This increase in the cost of medical treatment has been due only to a certain extent to the higher fees paid to physicians The main increase has evidently been due to the broader scope of treatment due to the progress of therapeutics, to the extension of treatment by specialists, and to the increased recognition by the working classes of the importance of health and their willingness to make large sacrifices to obtain it

The sickness funds are usually disposed to give a very liberal interpretation to medical treatment The treatment by specialists under most funds depends on the recommendation by the general practitioner first consulted, but in some towns, such as Munich, members are allowed to go directly to any specialist on the medical list without previous recommendation Specialists with whom the large sickness funds conclude agreement are those for eye, ear, nerve, skin, throat, stomach and women's diseases Medical treatment often comprises Roentgen-ray applications, electric treatment, mechanical exercises, such as the Zander institutes, and the like In 1912 the central committee of the sickness funds of Berlin completed the equipment of an establishment for general use, including Roentgen-ray, hydrotherapeutic, electric and physical treatment on a large scale, and in the course of the first fifteen months, 6,800 persons were treated Some of the large federations of sickness funds, like those of Leipzig and Dresden, have well equipped rooms attached to their central offices in which mechanical treatment is given in the most approved methods The large sickness funds in the towns also provide their sick members with medical baths of great variety

The accident funds also are insisting more and more that they shall take charge in the early weeks of many of the fractures and other injuries in order that they may obtain, by proper surgical care and exercises, better results and less total permanent or partial disability The treatment of teeth is usually regarded as falling within the scope of medical benefit, but artificial teeth are seldom provided, though some funds make a contribution toward their cost Some large federations of local sickness funds, like those of Stuttgart and Düsseldorf, have their own dental clinics, equipped and worked at great expense

The drugs which may be prescribed by authorized doctors include not only all the drugs scheduled in an imperial rescript as being reserved for sale by qualified pharmacists, but also medicaments in general The rules of some sickness societies prohibit the use of drugs, the therapeutic value of which has not been sufficiently proved, and of certain expensive drugs There are certain rules, and definite care is required of the physicians that they shall prescribe economically, and the medical controlling committees criticize closely the economy or lavishness with which the ingredients of prescriptions are chosen In Frankfort all physicians about to enter the funds must spend six months in attending the meetings of the committee, during the sessions of which discussion of prescriptions takes place The appliances usually given include trusses, spectacles and similar appliances There may, however, be provided larger appliances in the way of additional benefit When this is done, a limit, of course, is usually fixed The Berlin local sickness fund for commercial employees, in addition to minor appliances, supplies artificial limbs, appliances for flat feet, corsets and other supports to a maximum cost of $12 50 for any one person The sickness fund of the General Electric Company of Berlin supplies artificial limbs to the amount of $12 50 for any one person The Leipzig federation of sickness funds provides artificial limbs and teeth and other larger appliances to a value of $18 75 for any one person Some funds leave a provision for larger appliances to the discretion of the executive The law of 1911 uses the term "other minor appliances" instead of "similar appliances" It empowers sickness funds to supply appliances to cripples to enable them to obtain employment, to fix a limit of value up to which minor appliances are provided, and to contribute up to that amount toward the cost of more expensive appliances

HOSPITAL AND INSTITUTIONAL TREATMENT

Although hospital treatment as an alternative to home treatment now ranks as a minimum benefit, the law reserves to sickness funds an unconditional right to decide as to whether the alternative shall be offered or not Hospital treatment, however, is very widely given, and the expenditure under this head forms an important part under the cost of medical benefits The provision of hospitals is, in Germany, a duty of the local government authorities, and the public hospitals are used for the great majority of patients so treated In the larger towns a certain proportion are treated in institutions managed by ecclesiastical bodies, and in state, university and private clinics Such treatment is usually made dependent on the prior consent of the executive of the fund except in urgent cases Hospital maintenance is paid for by fees which usually vary from 50 to 75 cents per day both in public and in private institutions Sometimes sickness fund patients are treated in public hospitals at bare cost or even under cost There is no extra charge for operations in public hospitals, but in private clinics these are generally paid for extra

Pension boards which administer the invalidity insurance law supervise the sanatorium treatment under the German insurance system As a rule a sickness fund and the pension board for the district agree to bear a portion of the cost of their institutional treatment The cost of curative treatment of all kinds given by the pension boards of Germany in 1910 amounted to over $6,000,000, and after the deduction of all refunds, the cost to the pension boards themselves was $5,250,000

The large sickness funds themselves do a similar curative work, and this is one of increasing importance Thus the Leipzig Federation of Sickness Funds has the use of five sanatoriums and convalescent institutions, to which 3,038 patients were sent in 1911, while 2,602 of its members were sent to baths and health resorts The Düsseldorf fund has a convalescent home, and other large funds are in the same position

MEDICAL BENEFITS IN NORWAY

In Norway the local insurance societies are required to render the following aid to a member himself free medical attendance and the first supply of such accessories as eye glasses, trusses, etc., and when surgical treatment is required, bandages and the medicaments required for such treatment according to the surgeon's order In cases of sickness coming under the accident insurance law, free medicine, in cases of invalidity, pecuniary aid equal to 60 per cent of the average daily wages of one of the four income classes defined in the law, but the pecuniary aid, together with any payment the person concerned receives for work during his sickness, or with any pecuniary aid he may receive from private sickness insurance, shall not amount to more than 90 per cent. of his actual income at the beginning of his sickness For persons who work for no wages and voluntarily insured persons who have no income, the total pecuniary aid shall not amount to more than 16 cents per day In the case of confinement, pecuniary aid for six weeks and, if necessary, physician's attendance These grants are made on condition that the woman has been a member of a public or recognized private or communal sickness society for at least ten consecutive months immediately preceding If sickness results, the usual sickness aid shall be given in place of the confinement aid Burial aid equal to twenty-five times the average daily wages in the income class concerned, but not more than 50 crowns, or $13 40 To the wife or husband of the member for whom he or she provides, and to children under 15 years living at home, free medical attendance only

In place of the benefits just mentioned, hospital or asylum care may be given by the advice of the physician In the case of an industrial accident, the Royal Institution of Insurance may, in accordance with the industrial insurance law, require that this be done During a person's care in a hospital, no pecuniary aid is given to him If he has relatives dependent on him, they are given pecuniary aid equal to 20 per cent of the average daily wages if there is only one dependent, 35 per cent if there are two, and 50 per cent if there are three or more

Money benefit is paid for six days in the week while the person is incapacitated for work, but not for the first three days of sickness and not to exceed twenty-six weeks in any one case of sickness A recurrence of the same sickness in the year is regarded as a continuation of the first case, and pecuniary aid shall not be given for more than twenty six weeks altogether If a member has received pecuniary aid for for twenty-six weeks, he shall not receive pecuniary aid for more than thirteen weeks for new attacks of the same sickness during the following year, but if no such attack occurs during this year, a subsequent attack is regarded as a new case and treated accordingly If, for the same case of sickness, a member has received aid for the thirty-nine weeks altogether, he shall receive no more aid for this sickness until two years have expired and he has been during this time free from the sickness in question Every day in the hospital is counted as one day of pecuniary aid

In the case of sickness due to industrial accident, the local sickness society is not required to give assistance for more than four weeks, but the national society, that is the Royal Institution of Insurance, may require that aid be continued beyond this time with the assurance of reimbursement by the royal institution from the funds of accident insurance In case of an injured person who did not have sickness insurance at the time of the accident and is not assured of full wages for three months, the Royal Institution of Insurance may require that the local society shall care for such person on the conditions mentioned above. If a workman, while temporarily employed in a foreign country, is entitled to aid under this law, his employer is under obligation to render this aid himself and he shall be reimbursed by the local society If a servant is receiving care in sickness in the home of his master, the latter receives the pecuniary aid due the servant under the law The master must give such servant care for six weeks unless the sick person can, with the approval of a physician, be put into a hospital

BENEFITS IN ENGLAND

Under the present English law the benefits conferred on insured persons are of two kinds the minimum benefits to which, with certain qualifications, every insured person is entitled, and the additional benefits to which an insured person may be entitled if he is a member of an approved society which shows a surplus on valuation In each case a contribution of two ninths in the case of a man and one fourth in the case of a woman will be made by Parliament toward the cost of benefits The minimum benefits are, first, medical benefits, that is, the right throughout life to free medical attendance by any physician who applies to the insurance committee for the county or county borough in which the insured person resides for a place on their list, and who consents to accept him as a patient If the physician of his choice refuses him, he will be assigned by the committee to one or other of the physicians on the list. Medical benefit includes free medicines and drugs, and such appliances as the insurance commissioners may allow It does not include any right to attendance in respect of a confinement. As one of the additional benefits, the right to medical treatment may be extended to the dependents of an insured person Second, sanatorium benefit, which is the right throughout life to treatment in a sanatorium or otherwise for an insured person suffering from pulmonary tuberculosis or any other disease which the local government board may appoint. The insurance committee which administers this benefit may also pay or advance the traveling expenses of an insured person to and from the sanatorium This benefit may be extended to his dependents if the sums available for it allow, independently of any surplus in the member's own society Third, sickness benefit a payment of $2.50 a week for a man and $1 87 for a woman beginning on the fourth day of illness and continuing for twenty-six weeks, notice of the illness must be given before the claim can be allowed An insured person will not be entitled to this benefit until twenty-six weekly contributions have been paid in respect of him, and it is this benefit which, in the case of a member of an approved society will be reduced if he is in arrear Fourth, disablement benefit, which is a continuation of sickness benefit at the rate of $1.25 a week for a man or woman, lasting as long as the illness The right to this benefit does not accrue until 104 weekly contributions have been paid in respect of the insured person but both sickness and disablement benefit will become payable as soon as the necessary period has elapsed and the necessary contributions have been paid although the illness began before that time. The right to both of these benefits ceases at the age of 70 The test for both of them is that the claimant must be rendered incapable of work, that is, of any work whatever, by some specific disease or by bodily or mental disablement, but any disease or disablement in respect of which he is entitled to compensation or damages from his employer or any other person under the workmen's compensation act of 1906 or the employer's liability act of 1880 or at common law is excluded In that case, however, his society or insurance committee may assist him to enforce his rights Any approved society may substitute for sickness or disablement benefit or part of them any of the additional benefits and may give its members an option in the matter Fifth, maternity benefit, which is a payment of $7.50 in the case of confinement of the wife, or where the child is a posthumous child, the widow of an insured person, or of any other woman who is herself an insured person Where a married woman, or in the case of a posthumous child, a widow, is herself an insured person, she will be entitled to sickness or disablement benefit as the case may be during her confinement, in addition to her maternity benefit, but any other woman, that is, any unmarried woman, will not be entitled to those benefits for four weeks after her confinement unless suffering from some illness not connected with it The right to maternity benefit will not accrue until twenty-six, or in the case of a voluntary contributor fifty-two, weekly contributions have been paid The benefit will be administered in cash or otherwise at the discretion of the society or insurance committee concerned, but in every case the mother will have the right to choose a physician or midwife to attend her whose fee must be paid out of the $7.50 benefit.

Sickness, disablement and maternity benefits will not be paid to a person in a hospital, infirmary or sanatorium, but may be applied for the maintenance of his dependents, if any, or if he has none, may be paid for the upkeep of the hospital or infirmary, or, in the case of a sanatorium, to the insurance committee Where a married woman who is herself insured and entitled both to maternity and sickness or disablement benefits goes into a hospital or infirmary for her confinement the maternity benefit will be paid to the hospital or infirmary, but the sickness or disablement benefit will be applied for the maintenance of her dependents, if any

Besides minimum benefits, there are additional benefits which an approved society can give to its insured members if at the end of each three years it is found to have a surplus available. These include an increase of the minimum cash benefits, allowances for partial disablement and during convalescence, pensions, distress payments, and remission of contributions, but not death benefits It can give him, in fact all benefits that the money will pay for, that is to say, all benefits which can be given to a man joining at 16 and paying a contribution of 14 cents a week, the amount depending on the management of the society and the health of the members

Finally, there is a prospect of extended benefits at the close of a period of eighteen years To the worker who joins as a young man and who does not expect in the course of nature to draw heavy sick pay before reaching the age of 40 or 45 this prospect of extended benefits is of real value The fact is that for a period of eighteen years a part of the contributions goes to a fund for equalizing the benefits of old and young, at the end of that time, when the process of equalization is complete and the fund provided, the whole of the contribution of 14 cents a week and the whole of the state grant of 4 cents will be available for the purpose of paying benefits unless some further small accumulation is made and the benefit so extended will be paid to insured persons when the period is complete. It is important to remember that all these benefits are guaranteed within limits, to members of approved societies only The deposit contributor will get only benefits to the extent of his balance at the postoffice, plus the state grant, and is therefore not really insured The position of deposit contributors must be reviewed by Parliament before Jan 1 1915 Whether, owing to the war, this was done or not, it is impossible to say

There are however, six classes of insured persons, in addition to those already mentioned who will not receive all the benefits in full First are persons under the age of 21 not married and having no members of their families dependent on them, second employed contributors who become insured within one year after the commencement of the act and are then over the age of 50, third, employed contributors who enter when above the age of 17 after one year from the commencement of the act fourth employed contributors whose employers with or without their consent exercise the option of undertaking the liability to pay full wages during about six weeks of sickness During the six weeks when full remuneration is received from the employer, no sick or disablement pay will be due to the insured person but it will begin when the liability of the employer ceases Fifth, those of men over 65 and under 70 at the commencement of the act, sixth those of aliens

All these six classes have certain qualifications and certain conditions under which they are partially insured, the details of which are unessential for the purpose here and must be obtained from the act itself

Working of the British National Insurance Act

There is a great advantage in studying the workings of the English sickness insurance law We are able to study a law which is in the process of reaching its equilibrium To obtain this equilibrium there has been an intense and bitter fight of the medical profession for its rights, for the government was endeavoring to bring the insurance act into operation without consultation with the profession whose duty it was to administer it To appreciate what it means to administer such a huge machine as this government insurance scheme is, a statement of the Committee on Inquiry instituted by the Fabian Research Department in July, 1913, is very instructive

"The immense organization required for issuing the benefits to these 13,700,000 of insured persons, of whom nearly 11,000,000 are in England, appears—so far as the actual payment of the money by the approved societies is concerned—to be working on the whole with a fair degree of efficiency We gather that in the aggregate something like 80,000 new claims per week are made in the United Kingdom for sickness benefit and 18,000 for maternity benefit on the 23,500 approved societies and autonomous courts, lodges or branches, and that the total number of claims paid, new or old, for both benefits amounts each week to between $1,250,000 and $1,500,000, representing a total payment that often exceeds $750,000 in a single week The 23,500 societies, lodges and courts evidently differ greatly in the rapidity with which they deal with their claims, the stringency of the examination to which these are subjected, and the promptitude with which the decision is carried out But regarding England as a whole, with respect at any rate to four fifths of the cases, the large sum involved is being got into the hands of the sick persons, and in the case of maternity benefit now into the hands of the mothers themselves, with commendable regularity and promptitude The doctors, after some initial objections, are now giving their certificates without charge in terms enabling the great majority of the claims to be at once admitted"

The last sentence is equivalent to saying that the individual animosity and antagonism to the insurance act among the physicians has practically subsided To understand the antagonism with which the insurance act was received in England by the physicians, one must understand the situation that existed previous to the passage of the act and also some of the contentions that arose before the act went into effect

CONDITIONS BEFORE THE ACT

About ten years ago it became very evident in England that the circumstances under which the general practice of medicine could take place were rapidly becoming less and less advantageous to the profession[8] The result of preventive medicine and public hygiene had brought about such a diminution of the infectious diseases that there was a very noticeable diminution in the income and in the medical practice from these sources, especially since in a vast majority of these cases, when they occurred, the patients were sent to isolation hospitals to be cared for and were not kept in the hands of the practitioners It is said that where many practitioners among the poor had ordinarily received $700 or $800 a year from this source alone, they now hardly receive $50 a year It is also said that twenty years ago the obstetric practice of a general practitioner was an important part of his income, and that at that time it was thought that 70 per cent of the confinements were attended by physicians At present, especially in the large towns, 80 per cent of the confinements are attended by midwives, and even when physicians are called in, the fees are much lower than they formerly were Not only had it become noticeable that practice among the poor meant very small fees with many bad debts, but also it was well recognized that the poor could not pay for their medical services without crippling themselves for many months to come after any illness of more than ordinary length This had caused various forms of clubs, associations and medical benefit societies to spring up, and what had been undertaken in many instances as part charity had become settled as a method of taking care of the poor, the medical fees for which were notoriously inadequate for the services rendered Lodge practice and club practice were so prevalent that the British Medical Association undertook to investigate the situation, and made a report in 1905 It is evident from this report that the usual method of payment was by capitation with all its usual evils, inadequate payment for excessive work, and the resulting poor medical return to the patient This, in return, placed the club physician on a contemptible footing, and if anything serious was the matter, in which an ordinary fee would be paid, the patients invariably sent for what they called a "proper doctor" There was no possible security of tenure of the position as physician to these lodges, and physicians were under lay control and were liable for the most trivial causes to be dismissed As the complainants were also the judges, physicians were dismissed for what patients considered to be harshness when the physician was often conscientiously endeavoring to prevent malingering The remuneration in the lodge practice was difficult to obtain, but in 269 clubs providing attendance for males only, records were kept, and Table 5 shows the results[8]

The average fee obtained, according to this table, per visit is almost exactly 21 cents, and each club member on the average had been attended four times during the year This table does not take in the attendance for giving of certificates for unfitness to work, as the physicians did not keep record of these visits because they did not charge for them, but making out certificates, as is well known, is time consuming It was further stated that most club physicians did not keep record of attendance on club patients when no medicine was given, so these statistics are understatements rather than overstatements of the situation Moreover, when the club or lodge only cared for the head of the family, the lodge physician had no guarantee, if he cared for the insured, that he would be called in to care for the rest of the family, because, as stated above, the lodge physician was looked down on even by the patients as being an inferior sort of doctor

TABLE 5 —REMUNERATION IN LODGE PRACTICE BEFORE THE NATIONAL INSURANCE ACT, 1911

Annual Capitation Fee	Members	Average Capitation Fee	Average Attendances per Member per Year	Average Fee per Attendance
$0 50 to $0 75	9,630	$0 59	$3 59	$0.159
75 to 1 00	9,311	81	3 67	.211
1 00 to 1 25	17,741	1 02	4 46	2196
1 25 and upwards	4,211	1 35	5 43	.2672

The reasons given for the hold the lodge practice had on the profession were the usual ones that the lodge work forms only part of the practice and can be done in the midst of the daily routine of visits, or that it is undertaken by beginners to gain a foothold and a living until they can obtain a better practice, and among the older practitioners it is done because, if they are willing to do it, there will be less likelihood of other physicians settling in that district and competing in other practice—all of these reasons being the practical, everyday economic questions of existence One of the practical results of the investigation of lodge practice was that the contract practice committee of the British Medical Association had obtained the approval of the Representative Meeting, equivalent to the House of Delegates of the American Medical Association, to a scheme to establish what was called a Public Medical Service organized by the profession, and in a few towns, such as Norwich, a medical association on the Association lines was actually established by the medical profession and several such services successfully competed with the friendly society clubs The lodge practice report of the British Medical Association contains a majority and a minority report In the majority report the association recommended the extension of the contract system of the clubs, and while this was preferred rather than the minority report, the British Medical Association preferred the scheme as spoken of above which it itself had started, and had it not been for the appearance of the insurance law, this undoubtedly would have been put into effect The minority report recommended that a unified medical service should be established under the control of the county and county borough public health authorities It was felt that the minority proposal for a system of whole-time medical officers could not be confined to the poorer classes and that a free medical service open to all would result The profession in general was opposed to this system because of the opposition which had arisen between the health officers and the general practitioners, and they feared that domiciliary medical attendance would arise under the control of the boards of health which the profession had universally so far opposed

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[8] Carr, Garnett and Taylor National Insurance

CONTROVERSY BETWEEN THE BRITISH MEDICAL ASSOCIATION AND THE GOVERNMENT

It was during the discussion of the majority and minority report that the principle of free choice of physician became prominent, and it was felt that any salaried public service would prevent this freedom of choice When the insurance act was proposed, the British Medical Association presented six cardinal points which it considered as essential to be incorporated into the act. First, an income limit of $10 a week to those entitled to medical benefits, second, free choice of physician by the patient subject to consent of physician to act, third, medical benefit to be administered by insurance committees and not by friendly societies, fourth, method of remuneration of medical practitioners adopted by each insurance committee to be according to the preference of the majority of the medical profession in the district of that committee, fifth, medical remuneration to be what the profession considered adequate with due regard to the duties to be performed, sixth, adequate medical representation among the insurance commissioners on the central advisory committee and on the local insurance committees and statutory recognition of a local medical committee representative of the profession in the district of each insurance committee. Moreover, it was agreed by the majority of the profession, in the signed agreement with the British Medical Association, that they would undertake no medical service unless under such agreement as this

Without going into all the details of the dispute, four of these six demands of the medical profession were granted by the government and incorporated into the act. The first one that the act be limited to patients having a maximum of $10 a week income was not granted, it was finally decided to include up to $15 a week. In the beginning the government contemplated allowing a capitation fee of $1 12 but after a final refusal by the physicians to act and within a very few days before the act was to go into effect the government compromised and allowed a straight capitation fee of $1 62, and this further sum could be increased by 12 cents per capita to any panel physician for treating tuberculous patients A minimum capitation of 8s 6d., or $2 12, was claimed, not including extras, medicines for members of approved societies, and the recognition of payment per attendance was also claimed in which case the fees would be on the basis which should be deemed an equivalent to the foregoing by the State Sickness Insurance Committee with the recognition of a $10 maximum in a week income limit.

There was also an ingenious scheme put into effect to tempt the physician to be economical in prescribing drugs The amount allowed for each patient was 37 cents per patient for drugs and appliances There was set apart 12 cents for each patient which was called "the floating sixpense.' If, by economical prescribing the 37 cents was adequate for the drug bill then the full 12 cents went to the physicians If the latter by extravagant prescribing raised the drug bill higher than 37 cents per patient then the excess was taken out of this floating sixpense fund' and paid to the pharmacist, the remainder going to the physicians The straight capitation fee, therefore became $1.74 if a man took care of tuberculous patients and a possibility of $1 86 if the physician attained the full amount of the 'floating sixpense." The British Medical Association refused these demands advising that the medical men should demand free choice of physicians with remuneration for attendance and not capitation. This the government refused The second day after the act had gone into effect 10 000 physicians had accepted service, and a week later 15 000 were on the panels The British Medical Association acknowledged its defeat by releasing its members from their pledges, thus permitting any physician to enroll This controversy between the British Medical Association and the government was, however, the cause of many of the difficulties arising in the administration of the act which might otherwise have been avoided, and produced regulations for medical benefit that were hastily drawn

REGULATIONS FOR MEDICAL ATTENDANCE

The English act guarantees adequate medical attendance and treatment to the patient, but the panel physician contracts to give only such treatment as is of a kind which can consistently with the best interests of the patient be undertaken by a general practitioner of ordinary competence and skill, and, further, when the condition of the patient is such as to require services beyond the competence of an ordinary practitioner, the practitioner shall advise the patient what steps to take so as to obtain the treatment his condition may require These medical regulations are made by the English Insurance Commission so they are uniform throughout England On this basis, therefore, Roentgen-ray diagnoses, pathologic and bacteriologic examinations, major operations or other operations requiring an assistant in addition to the practitioner and the anesthetist are not included under these ordinary services Any physician is not expected to render any service that an ordinary practitioner cannot render even if the doctor possesses the adequate skill However, if an emergency arises which makes this extra service imperative, if the doctor is able to supply it, he is in duty bound to perform it. To all patients needing more than the ordinary care of the average general practitioner, the act and regulations simply provide that this general practitioner shall furnish advice as to how these extra services may be obtained, but there is no provision in the medical regulations or act for the furnishing of these extra necessary services Herein lies a serious weakness of the English insurance act.

These regulations state that the normal method by which the insured persons may obtain their care and treatment is by the panel system Every insurance committee is required to adopt this panel system unless the commissioners are satisfied on inquiry, that it does not afford adequate medical service when other medical methods may be adopted, provided these give as good service as the panel system should give The insurance committees form the panels of practitioners There may be formed by the committee different panels for each convenient district of the area under the committee Every practitioner has the statutory right to act on any panel on the terms and conditions offered by any insurance committee in respect to that panel. The committee cannot exclude any practitioner or remove a practitioner A practitioner may, if he sees fit, be a member of more than one panel Thus a physician living near the boundary between two counties may be on the panel of each county Every insured person who is entitled to attendance and treatment from the practitioners on the panel is free to select his own physician subject to that physician's consent. Those who make no choice and those who are refused by the physicians to whom they first apply will be distributed to the physicians on the panel This distribution as far as practicable will be made by the practitioners on the panels themselves Each physician must fix hours of attendance for seeing at some place appointed by him persons requiring his services, whose condition does not necessitate his visiting them Practitioners in the district arrange with the insurance committee for an hour to be fixed on or before which messages for visits must be sent by the insured person whenever practicable. In a district where partial or complete payment per attendance is adopted, special fees will be paid for visits made in response to a message received after the hour thus fixed and on the same day on which the message is received Physicians have to keep certain definite prescribed records, and each insurance committee makes provisions for the infliction of penalties on insured persons who make unreasonable demands on the physicians to whom they are assigned.

In 1912 disputes between two practitioners on the panel were referred to the local medical committee to take such action as they might think necessary Questions arising between physician and patient which cannot be adjusted through the principles of free choice and the physician's right of refusal of a patient may be referred by either party to the medical service subcommittee, which consists of three physicians chosen by the local medical committee, three insured persons and a chairman chosen from those members of the insurance committee who are appointed by the county or county borough council or from those appointed by the commissioners If the insurance committee finds the insured person at fault, it may transfer him to another practitioner or fine him or, in the case of repeated offense, suspend him from benefit If the practitioner is found at fault, the patient may be transferred to another practitioner, but the committee cannot remove the practitioner from the panel or inflict any penalty beyond the transfer of the patient The removal of a practitioner can be made only after an inquiry conducted by a committee of inquiry especially appointed by the insurance commissioners for the purpose This committee of inquiry must consist of two members of the medical profession and one barrister or solicitor in actual practice appointed by the insurance commissioners The commissioners can proceed only on the result of such an inquiry

After a year's working of the act it was found that this local medical committee, which was composed of all the practitioners in any county or county borough, was insufficient to give justice to physicians working on the panel, and a special panel committee was passed in the amendment to the national insurance act in 1913 and all questions regarding the attendance and treatment of the insured persons must go through this local panel committee Where no other local medical committee had been appointed, this panel committee should be recognized as the local medical committee It was further provided in 1914 that all disputes were referred to medical service subcommittees appointed by the insurance committees as follows each committee to consist of three persons or, by consent of the insurance commissioners, five persons, one person appointed by the local medical committee and a sufficient number of the panel committee so that the representatives of the local medical committee and panel committee shall equal the number appointed by persons representing the insured persons, "provided that unless the person appointed by the local medical committee or one of the persons appointed by the local panel committee is a woman, at least one of the persons of the committee representing the insured persons shall be a woman, but the woman so appointed may be a person who is or is not a member of the committee" The chairman shall be selected from the members of the committee who are not insured presons, practitioners or registered pharmacists Similar pharmaceutical service subcommittees are appointed for dealing with any complaint from a person entitled to receive treatment from a practitioner on a panel against a person supplying drugs or appliances in respect of the quality of the drugs or appliances supplied or in respect of the failure to supply such articles These committees are made up of three members of the committee representing the insured persons and three members of the pharmaceutical committee There is the same proviso that one member of this committee must be a woman There are also provided the joint service subcommittees between the medical service subcommittees and the pharmaceutical service subcommittees These joint service subcommittees deal with any disputes in which pharmacists or physicians are both involved Questions arising between two practitioners involving questions of the efficiency of the medical service of insured persons still come before the local medical committee, not before the panel committee, and the local medical committee may request the commissioners to remove any practitioners from the panels The panel committee has the further duty of investigating the character and amount of drugs and appliances ordered for injured persons by practitioners on the panel, and if it is found that the cost has been in excess of what may be reasonably necessary, the panel committee can recommend to the insurance committee the amount that should be recovered from the practitioner This may be recovered by deduction from the amount payable to him in respect of any year, and the funds so recovered shall be paid to the practitioners' fund

All decisions between the panel committee's subcommittees and insurance committees are subject to appeal to the insurance commissioners If a question arises that a practitioner has failed to perform any operation or service which can consistently, with the best interests of the patient, be undertaken by a practitioner of ordinary competence and skill, the question should be referred to the local medical committee. If the local medical committee and the insurance committee cannot agree, the questions are referred by the commissioners to referees especially appointed These referees shall be chosen as two practitioners selected from any panel of practitioners set up by the joint committee for the purpose, or if no such panel exists, from any practitioners in Great Britain and one barrister of law or solicitor in actual practice. The joint committee here referred to is the joint committee panel of insurance commissioners of England, Ireland, Wales and Scotland The decision of these referees shall be final, and the referees in giving any decision shall state whether in arriving at their decision they took into consideration the practice and medical customs peculiar to the area in which the question arose When appeals are taken to the commissioners, the commissioners may authorize any two or more of the commissioners to hear and determine questions or appeals, and any decision of the commissioners or any of them made under this article of appeal shall be final The insured persons, unless through an appeal to the local committee, cannot change their panel except at the end of the year, and must notify the committee by the first of December of each year if they so desire to change. A practitioner cannot retire from the panel except at the end of the year, and must give notice not later than six weeks before the commencement of the year If, however, a practitioner wishes to discontinue practice, he must give two month's notice or, by special arrangement with the committee, he may discontinue at shorter notice

Any insured person may, on application, be allowed by the insurance committee to make his own arrangements for medical treatment, receiving from the medical benefit funds of the insurance committee of his area a contribution toward the cost If the income limit has been fixed locally, those whose incomes exceed that limit will be required to make such arrangements if they desire to be insured

METHODS OF REMUNERATION

Remuneration to the practitioners is made through the insurance committees The method which is adopted rests with the insurance committee, subject to the approval of the insurance commissioners, but in practice it was decided in accordance with the preference of the practitioners on the panels, the amount received by each doctor depending on the method adopted As a matter of fact, a straight capitation system has been adopted in all except Salford and Manchester, where a payment by attendance has been chosen The methods permitted under the law are straight capitation, that is, so much per patient per year This is simply for attendance on the insured person and does not include any income derived from attendance on wives and families of the insured, and on the uninsured classes The physician is paid for the number of patients on his panel at a certain definite time, the payment for each quarter being the average of those on his list on the first day of the quarter and those on his list on the last day of the quarter The regulations further provide, besides this capitation schedule called Schedule A, other schedules of B, C, D and E Schedules B and C are schedules of capitation system plus the payment for special services, the details of the special service simply being different in the two schedules, Schedule C dividing more minutely than Schedule B the special work which, according to the schedules, should be left to the choice of the practitioners of the neighborhood Capitation plus special services, however, can be regarded from two standpoints They can be regarded from the standpoint that the general capitation fund shall take priority over the special service fund and shall be paid first to the practitioners In occasions in which there is insufficient amount to pay for special services given, the value for each service shall be reduced but the capitation prices shall remain fixed On the other hand, in Schedule D of the regulations, the reverse is made possible so that the fund for special services shall take precedence and be paid in full, and if there be excess of such services, then the amount in the capitation fund shall be proportionately diminished and be paid last The regulations provide for the appointment of practitioners on the panel to protect against the overcharge of any individual practitioner

The other method allowed is payment by attendance Here all services are paid according to rates fixed for special services, that is, visits to patient's residence, attendance on patient at the practitioner's residence or dispensary, special visit—that is, visit paid by the patient's desire on the same day as the call received after a certain designated hour in the morning or on Sunday, night visits—that is, calls between 8 p m and 9 a. m in response to a call received during those hours, or treatment of abortion or miscarriage so far as not included in maternity benefit, setting a fracture, reduction of dislocation, administration of general anesthetic for the purpose of any operation included in any medical benefit treatment, or tuberculosis so far as the patient is not entitled to receive sanatorium benefit There is also in the regulations a fee bill entitled "A Scale for Calculating Remuneration in Respect of the Treatment of Temporary Residents"

DRUGS AND APPLIANCES

The insurance committees have drawn up a list of drugs ordinarily supplied Anything not included in the list must be subscribed on a special form This list is a matter of agreement between the physicians, the pharmacists and the insurance committee of each area. Physicians cannot dispense medicines Except in certain rural areas, by special permission of the insurance committee, they can supply drugs and will be given a capitation fee of $2 12 per person If they care for tuberculosis in this area, their capitation fee becomes $2.25 There are also special regulations for certain sparsely populated areas in which there are special grants made for mileage.

The working of the insurance act of Great Britain has brought out many unexpected factors First that the amount of sickness among the people was vastly more than even the physicians working among the poor had any conception of It was calculated that 60 per cent. of those on a physician's panel would come to him during the year for treatment. It was found with those caring for women that the sick rate among them was as high as 100 per cent. more than was calculated, and many were surprised to find how really ill and ailing many of these women had been, although dragging on with their work In some panels in London the sickness was as high as 81 and 88 per cent of the panels, and among the very poor in the city it was realized that they really had not been able to earn enough money to give them proper food by which they could be nourished to do their work, and there was a vicious circle of poverty, starvation and unemployment and sickness which began to be broken only when medical care attempted to increase the nourishment necessary to gain some measure of health

In the drug tariff in which certain lists of appliances are given, consisting of bandages and surgical dressings of simple kind, ice bags splints and catheters were the only other appliances furnished Trusses and spectacles were not included, even in the first instances of injury This is widely different from the German system, in which the spectacles and trusses are furnished in order that the workmen may go back to their work as soon as possible and keep off the sick lists In England there has been rather a "penny wise pound foolish" policy pursued because many insured persons have been kept on the weekly sick benefit lists who would have gladly gone to work but have been unable to do so because unable to buy spectacles or trusses out of their own pocket and the societies have been unwilling to furnish them although the price for these appliances was no more than a single week's illness of an individual

FACTS BROUGHT OUT BY FABIAN COMMITTEE

In general according to the Fabian Committee report the free choice of physician has not produced anything like an even distribution of the patients among the physicians The Fabian Committee asserts that in town after town for which it has the figures, about one fifth of the physicians on the panel were caring for one half of the insured persons, while four fifths of the physicians divided among themselves in comparatively small numbers the other half This gives the inevitable results of capitation and the same evil results as under the old lodge practice The report goes on to say that there is one case of the physician who pays, it is true, four assistants whose names are on the panel, together with a secretary and a nurse, having on his list just under 9,000 insured patients in addition to an extensive private practice There are many instances of physicians undertaking from 3,000 to 4,000 insured persons, sometimes without regular assistants "We notice with some surprise that even with these crowded lists, and in addition to waiting for hours, only the smallest fraction of insured persons have for any reasons whatsoever taken the trouble to change doctors Judging from the statistics we have seen, the changes do not average *from 1 per cent. to hardly 2 per cent* per doctor We consider that the medical attendance and treatment thus provided has various defects and shortcomings, in small matters and in great, not perhaps wholly or mainly the fault of the doctors themselves, which call for prompt amendment, and that it falls far short of the medical attendance guaranteed by the Act" The Fabian report also explains that the kind of service given was only for relatively slight ailments, and that the special treatments of eyes, ears, etc., and the really serious cases requiring hospital care, were not properly cared for

The working of the act brought out the fact that England lacked adequate hospital accommodations Previous to this the Fabian Committee asserts that not one county in England had a number of hospital beds equal to the low standard of two per thousand of the population In France the law requires that there shall be one bed for every 500 or fraction of 500 inhabitants, in Germany the necessity is reckoned as at least five per thousand in towns and three per thousand in the country

THE MATERNITY BENEFIT

The most serious breakdown in the English law has been in the administration of the maternity benefit. It was early found that it was a necessity that the money payment should be made to the woman herself and not to her husband except by her order In calculating on the premiums and not including the actuarial calculation for the sickness benefits of the English insurance act, the statistics of the Manchester Unity Society were taken This was a society composed entirely of men, and the actuaries loaded the benefits of these selected lives, allowing for various contingencies The actuarial errors were that no account was taken of the varying difference in sickness of different trades and the big variation of sickness occurring between men and women and married and unmarried women Calculating from the lives of selected men, the actuaries had forgotten all about pregnancy and sickness pertaining thereto

The sum total of sickness calculated for occurred as figured Many approved societies finding that their reserves were disappearing and that they were liable to be bankrupt, decided that pregnancy or any sickness due to it was not a disease but a disturbance of the normal functions and refused to pay for sickness due therefrom This has caused a great deal of hardship and indignant criticism In the report of the Departmental Committee on Sickness Benefit Claims, under the national insurance act, it was recommended that the financial burden of benefits necessary to provide the proper care for pregnant women should be removed from the funds of the approved societies and placed under the insurance committees, special funds being provided for this purpose They made the further recommendation that the new benefit to be created should be paid to a pregnant woman in the last four weeks of pregnancy whether she was incapacitated or not and that payment should be paid to the woman who was incapacitated from following her occupation the month previous to the last month, whether she was incapacitated by her pregnancy alone or by pregnancy accompanied by some other condition.

REFEREES

It has further been found that the panel physician cannot adequately cope with the decision when a patient shall go back to work In disputed cases there must be referees, and the committee just referred to recommended that referees be appointed by the commissioners and not by the approved society or by the physicians The referees should either be paid for full time or should be part-time referees, but should have the power of deciding when the patient shall be put off the rolls and be put back to work, and should be used also as consultants when a second opinion was needed by the panel physicians

The experience of the English law shows also the necessity of the referee to prevent valetudinarianism and malingering This is in accordance with the German experience already mentioned As, for instance, insurance companies in London and Bristol appointed referees to whom both physicians and societies could send doubtful cases for a second opinion In London 700 applications were made in two months' trial of the system Of the 375 persons who were examined, 208 were declared capable of work, 167 remained on the funds of their cieties, and 76 other persons failed to attend the examinaon, saying they were going to declare off[9] In eleven months e Bristol referee had 600 cases sent him, 197 by local physicians, and 403 by approved societies Of this number 240 were declared fit, 205 unfit, and 145 either did not attend the examination or returned to work

Another valuable work of the referee would be to standardize the giving of certificates by physicians and the standardization of what constituted "incapable of work" At present there is no control of the physicians on the panel in this respect

MATERNITY INSURANCE

Maternity insurance is of such importance that it seems wise that special attention should be paid to it and that it should not be passed over with a mere casual reference in considering the insurance laws in Europe Dr Lee K Frankel[10] sums up as follows, what has been done in this subject both in Europe and in the United States

"The industrial code of Germany forbids women's work during four weeks after confinement, and permits it during the next two weeks only on the certificate of a physician In Austria the law requires a rest period of four weeks after childbirth, and in Switzerland there is a rest period of two weeks before and six weeks after childbirth France has also enacted a compulsory rest period of eight weeks, which are to be equally distributed before and after childbirth Seven weeks of rest are required in Italy A rest of four weeks after childbirth is demanded by the Belgian and Portuguese laws, and the same period, which may be extended by one or two weeks through a medical certificate, is required under the law of Spain Holland and Norway have both instituted a compulsory rest period of four weeks, and Sweden has a six weeks' rest period law Great Britain prohibits the employment of women within four weeks after childbirth It is of interest to note that in the maternity insurance legislation which has resulted from these attempts to protect motherhood, the unmarried mother, as a rule, is given the same consideration as her married sister"

In Germany the war at first cut down the sick benefits considerably and especially the maternity benefits, but in December, 1914, these confinement benefits were again voted in the war relief Those uninsured wives of insured participants in the war are entitled to a single payment of 25 marks toward the cost of confinement, with 1 mark a day for a period of eight weeks, of which at least six must be after the actual confinement, and aid up to 10 marks for the ailments of pregnancy and nursing pay up to the conclusion of the twelfth week after confinement, to the amount of one-half mark a day The maximum expenditure permissible in each case is 133 marks All costs are borne by the empire In the case of insured wives of insured participants, the confinement pay is furnished by the society and the remaining benefits are given by the empire The insured wives of uninsured participants are entitled only to the benefits guaranteed by the society, and all costs must be borne by the societies

"In the United States, legislation directly affecting motherhood is much less common than in Europe, owing in all probability to the more recent entrance of married women into factory life Laws regulating rest periods before and after confinement have been enacted in Connecticut, Massachusetts, New York and Vermont In Connecticut a compulsory rest period of four weeks before and four weeks after childbirth is provided In Massachusetts there is a compulsory rest period of six weeks, two weeks of which are before childbirth New York does not provide for a rest period before childbirth, but the employment of women is forbidden for four weeks after this time The requirements of the Vermont statute are the same as those of Massachusetts

"Indirect provision for the protection of motherhood is found in the statutes of various states Conditions of labor of women are carefully regulated in a great many Women are forbidden to engage in certain occupations For example, in Alabama mine work is not allowed, in Arizona women are not allowed to work in saloons Colorado, Illinois and Indiana have a provision similar to that of Alabama Iowa and Louisiana forbid work in saloons These laws, as well as many others for the protection of the woman wage earner, while not primarily designed to protect working mothers, have, it is safe to say, the indirect effect of protecting the children of the next generation

"Another group of laws more general than these limiting occupation, but with probably the same indirect intent and effect, are those specifying the maximum working day These laws are general in almost all states California and Washington limit the working week of eight hours a day, while South Carolina has a maximum of twelve hours a day and sixty hours a week

"It is interesting to note in these various laws that the lowest number of hours and the most stringent regulations of the conditions of work are found in the Far West. Specific regulations forbidding work during and after pregnancy, however, appear only in a few of the most densely settled manufacturing states in the East.

"Minimum wage legislation, although not specifically directed toward the protection of mothers, aims very definitely to provide women with a sufficient salary so that their health and morals may be preserved It seems reasonable to suppose that one of the underlying purposes of this is to protect the future mothers The following states have enacted such legislation California, Colorado, Massachusetts, Minnesota, Nebraska, Oregon, Utah, Washington and Wisconsin"

Frankel further quotes Mayet of Berlin that it is self-evident that the physiologic needs of the mother and of the child are fundamental at the threshold of the infant's life, and that sickness and death are the punishment for the neglect of these laws Maternity insurance is a necessity to assure the working classes of the physiologic needs of the pregnant woman and her infant The Bohemian Sanitary Report is quoted to prove that the high rate of stillbirths in northern Bohemia is explained by the fact that women work up to the end of pregnancy in order not to forfeit their membership in the societies, and in France it has been found that the average duration of pregnancy is within the normal period of 269 days among women who observe a rest period before confinement but only 247 days among those who do not It is also said that the large measure of the abdominal diseases of the women of the working class is attributable to the fact that they are unable to obtain that rest after confinement which Nature demands The extent to which this is true cannot be deduced from statistics, but in the testimony before the Departmental Committee on Sickness and Benefit Claims, in England, it was brought out that the large increase of sickness among the married working women was due, in a great measure, to the lack of care in childbirth and to their returning to work too early Moreover, the English insurance act has brought out these facts to a degree which has astonished the physicians

In the care of children after confinement, the mortality among the bottle fed is notoriously greater than the breast fed, and the mortality is determined not only by the fact of breast feeding but also by its duration Roese of Dresden found that the extent of dental decay and rickets varied inversely with the duration of breast feeding On the basis of statistics of military recruits it has been proved that the weight chest and other measurements of adults varied greatly with the duration of the period which, as infants, they were fed at the breast. The same relationship is evident between breast feeding and efficiency in school These facts have been found by Friedjung, Groth and Hahn

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[9] Halsey, Ol[illegible] S Thesis on the British Health Insurance Act

[10] Frankel, L K Maternity Insurance, New York Med Jour, Dec 18, 1915

The following benefits and protection are deemed by Mayet a necessity in any scheme of maternity insurance a rest period before childbirth, with full compensation for wages lost, aseptic conditions of birth, and obstetric aid by a midwife and, if necessary, by a physician, a rest period after childbirth, with full compensation for wages lost, in case of necessity maternity care, either at home or in an institution, extension of the period of breast feeding by means of nursing benefit, and, if necessary, a pecuniary aid toward the nourishment of the infant.

"In Australia an entirely different philosophy underlies the maternity allowance provision, which also dates from 1912 In all other countries there are salary limits to the employment benefits, contributions are made by the workers, or by the employers and employees, and, in some cases, there are state subsidies In Australia, however, a gift of 5 pounds is made by the Commonwealth to each mother on the birth of a child *This covers all classes in the community,* and cannot properly be classed as insurance."

HEALTH INSURANCE IN THE UNITED STATES

The general situation in the United States today is similar to that in England and Germany before the passage of their comprehensive health insurance laws No state, municipal or other government in any way provides for or aids health insurance, according to the latest bulletin on health insurance of the Treasury Department. Medical benefit, however, is generally granted by both state and municipal authorities in the public hospitals which are supported so generally throughout the Union, for hospitals are nothing more or less than that amount of medical benefit which the community is willing to give for its own or neighboring sick poor And the same can be said of the free dispensaries Both state and municipalities go further and provide sanitation and preventive medicine through the various departments of health As a rule, this extends only to the communicable diseases under the sanction of the police power of the state In some instances, as in the New York City health department, therapeutic procedures are also added to the benefits given often in the homes, as, for instance, free diphtheria antitoxin and free meningitis serum given by trained inspectors on the advice of any physician to the poor at any time The New York health department goes farther and manufactures these substances, its laboratories adding also in no small degree to the scientific advancement of medicine in subjects relating to communicable diseases New York City also supervises the health of the children in the public schools both by physicians and by nurses Its services are mostly toward the prevention of disease, but in the special group of communicable diseases an enormous mass of work is done in their care and treatment. This care has developed from the necessity of absolute control if real prevention and limitation are to be obtained. Public care of the insane is in reality the permanent care of mental invalidity, and the public epileptic colonies are founded on a similar basis

Other evidences of health insurance are shown in the benefits given by the trade unions, both national and local, by employers' organizations for benefit of employees, such as the railroad funds and the establishment funds, mutual societies—that is, the fraternal orders, local lodges, general benefit societies and special sick benefit funds—and commercial companies operating for profit or on a mutual principle that is, industrial insurance companies and casualty companies doing industrial insurance The trade unions probably take in about 10 per cent. of the total number of the wage earners They are the only organizations which so far have successfully dealt with unemployment insurance. They are especially fitted for the carrying out of sickness insurance through their local lodges because members of the local lodge have a mutual supervision and restraint on each other All are practically subject to the same environment, and all possess approximately equal chances for health or sickness

BENEFITS BY TRADE UNIONS

In some of the large national trade unions the national body pays the disability and death benefits while the local bodies control the sick benefits Many of these unions do not pay for sickness for less than a week, and a week's waiting period is required Others begin payment after fourteen days, but pay then from the first day of illness Death benefit of various amounts is the most universal benefit paid Temporary disability, which is really sickness insurance, is not as commonly paid as permanent disability, and this last serious condition is paid by lump sum of the same amount as the death benefit, sometimes the payment of this permanent disability benefit disentitles the member to any other form of benefit, and unions paying the permanent disability benefits usually require a longer term of paid premiums for members who become entitled to this benefit than is required for members who become entitled to death benefits, the usual requirement being from one to two years In the report of the commissioner of labor,[11] it is stated that the generally accepted definition of permanent disability is the loss of a hand at or above the wrist joint, the loss of a foot at or above the ankle joint, the loss of one eye or both eyes, or a permanent disability caused by paralysis A few unions pay superannuation benefits as a lump sum per month through life, there is one union that pays $10 per month for six months in the year The cigar makers' union disguises this old age pension under the form of "out of work benefits," and a large number of recipients of this relief (according to Henderson in "Industrial Insurance") are infirm persons who cannot earn the average wages, and many of these are advanced in years This keeps them from going into the market on very much reduced wages, which they must take if unable to subsist.

Table 6 shows the kind of benefits paid in the 530 funds of the trade unions reported on nine years ago (1907) in the Twenty-Third Annual Report of the Commissioner of Labor It is given here as showing the type of relief which the trade unions give to their members

TABLE 6—BENEFITS PAID BY TRADE UNIONS

Kind of Benefit Paid	Number of Funds	Number of Members	Number of Persons to Whom or on Account of Whom Benefits Were Paid
Temporary disability	346	102 800	9 117
Death of member	401	133 821	1 472
Death of member's wife	86	26 790	111
Death of other dependents	40	10 190	179
Unemployment	10	3 398	424
Permanent disability in lump sum	3	1 730	
Permanent disability in form of pension	7	10,374	106

Of the 530 funds investigated 346 paid benefits on account of temporary disability of members, and of the 102 800 in the 345 funds which reported the number of benefits paid 9,117, or nearly 9 per cent., received benefits for temporary disability during the year previous It is further shown by this table that the death rate among these unions was about eleven per thousand members, for the death benefit funds have in the 395 trades reporting concerning this item 133 821 members and had paid 1,472 death benefits It is further interesting to note that in the ten funds paying benefits to members when out of work, nine reported statistics on this point that out of a membership of 3 898 unemployment benefits were paid to 424 members, or about 12 per cent., during the year It so happened that in the three funds paying permanent disability in a lump sum no member was entitled

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11 Twenty Third Annual Report of the Commissioner of Labor, 1908

privilege of still having the insurance by being taken into another order by arrangement made in the liquidation These two societies are fair examples of instances in which, with inadequate rates, an attempt is made in voluntary insurance to keep up the increasing strain of advancing age and the increasing death rate Many of these fraternal orders, outside of their social or religious ceremonies, give life insurance, many of them in their lodges give medical benefits and cash benefits during sickness or injury They have generally among their membership the better paid classes of workmen and the more thrifty of employees on small salaries

Important and large as their insurance business is, it does not reach the really poor whose need is greatest, both for the protection against sickness and for death when it occurs Although many local lodges of the fraternal societies give, as it has just been said, sick benefits and medical benefits, they do not compose the majority of the so-called lodge practice When one speaks of lodge practice, what is usually referred to are usually small localized mutual benefit societies These are often formed of various races in which the binding element is origin from a single region abroad or the bond of one language at a time when its members are too recently arrived in this country to speak or understand English, or where, in the large cities, many foreigners are massed together living on low wages, and find that some form of mutual insurance against the calamity of individual sickness must be obtained to protect them from the necessity of using the dispensaries for their minor ailments and going to the public hospitals when seriously ill Their object in the latter regard is not always obtained, but it is an expression of the economic necessity which these people seek in the insurance idea for their protection

These lodges are almost invariably run on the system of capitation payment to the physicians, that is, so much per head per year There is competition among poor physicians, themselves struggling to obtain several lodges that they may eke out a meager income, and the commercial haggling by the officers of these lodges bidding down the struggling doctors to a minimum so that all the evils of the system are brought out in full force Underpaid physicians, enormously overweighted by large panels of people to take care of, result in inadequate remuneration to the physicians and inadequate care to the sick. The physician loses his self-respect from knowledge of the kind of service he is giving he is held in contempt by his patients The whole service and the capitation system under which it is possible is held as the criterion of what is dishonorable and contemptible in the practice of medicine The results to the unfortunate physician who must give this service are disproportionately severe for his responsibility in the matter The vicious circle is formed by certain economic situations, and this circle cannot be broken except by a change of the economic forces Compulsory insurance by the state can alone solve these economic problems of the very poor and release the unfortunate physician who, facing starvation, must accept this lodge practice

COMMERCIAL INSURANCE COMPANIES

There remain to be considered the commercial insurance companies giving so-called industrial insurance or giving health insurance The so-called industrial insurance is practically funeral insurance or death benefits among the poor This amounts to enormous sums in the United States In 1881 the average per policy was $91, in 1911 this had risen to $138 This does not mean any increase in the protection that a person in his last illness may obtain, but it means the increased amount of extravagance with which the standards of burial have risen among the poor The self-respect among the poor demands that their dead shall be decently buried at their expense, and a pauper burial is considered with horror among them

The proportion of the population carrying industrial insurance in the United States is nearly 27 per cent. Thirty-two companies in 1911 were doing this business There was about $785,900,000 worth of insurance written during the year There were about 24,700,000 policies in force, the amount of insurance in force was about $3,423,000,000, the premiums received amounted to about $183,500,000, and the losses paid amounted to about $50,231,000 As Dr Rubinow expresses it, "It is too well known that the greatest portion of money paid out in industrial insurance claims readily finds its way into the pockets of undertakers as a result of deplorable extravagance in funeral arrangements, encouraged by a lifelong insurance for the purpose of a decent funeral" In New York State alone, in 1914, $29,223,000 was given in premiums for this burial insurance to the four companies doing this business The recent Mills bill for health insurance in New York State, if it had passed, it is calculated would have cost $30,000,000 That is, this law offered to the people of New York State, having an income of $1,200 a year or less, sickness insurance, funeral benefits and maternity benefits for only $1,000,000 more than they now squander in funerals alone The $183,000,000 paid in 1911 in this country for funeral insurance almost equals the total cost of the German social insurance system Thus the American working class pays for funeral insurance as much as is contributed in Germany by all three parties concerned—the wage-earners, the employers and the state—for accident insurance, sickness insurance, maternity insurance, invalidity insurance and old age insurance combined[12]

The insurance companies which give the industrial insurance, or burial benefit, attempted in their earlier history to provide sick insurance, but the amount paid for burial insurance alone absorbs practically the greater part, if not all, of the available resources for insurance purposes in the families of small income There was, however, an attempt made by these companies to provide sickness insurance, but the effort generally failed and had to be abandoned Henderson[13] quotes President Dryden of the Prudential Insurance Company of New Jersey as saying that a company which has its business scattered over a wide territory, and must act through salaried agents, cannot undertake sickness insurance, and that this form of insurance is possible only in brotherhoods or small groups in which the members know each other and can detect and discipline malingerers There is no question that these industrial insurance companies are at an enormous disadvantage in their endeavor to furnish any adequate sickness insurance that is at all available to the poor

At a hearing before the Committee on Labor of the Sixty Fourth Congress, held April 6, 1916, the testimony of the Hon Charles F Nesbit, superintendent of insurance of the District of Columbia, brings out this point in a very striking manner This testimony says that there are about 90,000 wage earning negroes in Washington They form most of the casual labor, not skilled labor, but servants and day laborers and drivers, and such workers as those Among these people there has grown up a system of insurance against sickness largely confined to the District of Columbia, Maryland, Virginia and the Carolinas, and somewhat in Tennessee. The greatest problem with these people is that when they become sick their pay stops This insurance is not confined to the negroes, but is used by the poor white people of the District of Columbia as well Mr Nesbit further says that there is a very strenuous effort on the part of these poorly paid people to provide against sickness, but this commercial insurance is a very inadequate way of providing it, since they pay $500,000 a year in premiums and out of that all they get back is $200,000 The companies pay practically sixteen claims out of every seventeen claims made to them, practically 94 per cent of all claims put in, and yet the result is that every time $100,000 is collected from the poorest citizens of the foregoing territory, it costs $60,000 to collect it and $40,000 is all that is paid back The expenses, of course, of collecting this amount are extremely high because the premiums are collected in small amounts, of 10, 15 and 25 cents a week, and agents must collect it by going from house to house This 60 cents out of every dollar is made up of the administration expenses of overhead charges, of fees to the agents and of profits

This shows the difficulties of the situation of the insurance companies endeavoring to give sickness insurance Because of inadequacy of control by the companies of their insured people scattered over wide areas, because of the necessities of the manner in which they must carry on their business, it is an impossibility, with the best of intentions, to give an

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12 Rubinow Social Insurance, p 420

13 Henderson Industrial Insurance in the United States, p 162

adequate health insurance to the really poor who are in the greatest need of this protection

REPORT OF THE COMMISSION ON INDUSTRIAL RELATIONS

These statistics show in general the mass of systematic and yet incoordinated attempts that have been gradually developing to bring about health insurance in the United States In the final report of the Commission on Industrial Relations, which was formed by act of Congress in 1912, we find the following conclusions based on the findings of Dr B S Warren of the Public Health Service

"Each of the thirty-odd million wage earners in the United States loses an average of nine days a year through sickness At an average of $2 per day, the wage loss from this source is over $500,000,000 At the average cost of medical attendance ($6 per head per year) there is added to this at the very least $180 000,000

Accidents cause one seventh as much destitution as does sickness and one fifteenth as much as does unemployment A great deal of unemployment is directly due to sickness, and sickness in turn follows unemployment. Sickness among wage earners is primarily the direct result of poverty which manifests itself in insufficient diet, bad housing, inadequate clothing, and generally unfavorable surroundings in the home The surroundings at the place of work and the personal habits of the worker are important but secondary factors"

This emphasizes the well known vicious circle of sickness, unemployment and poverty

The commissions recent study in Indiana showed that 17 9 per cent of the unemployment among women in stores in that state was due to illness In 1901, a federal investigation of 25,440 families showed that 11.2 per cent of heads of families were idle during the year because of sickness and the average period of unemployment was 7 71 weeks Other investigations show that from 30 to 40 per cent of cases requiring charitable relief are immediately due to sickness

The responsibility for the disease-causing conditions rests on the employer, the public and the employee The employer s responsibility includes, besides conditions causing so-called occupational diseases, low wages, excessive hours, methods causing nervous strain, and general insanitary conditions The public has in part recognized its responsibility in such matters as housing water supply foods drugs and sanitation The greatest share of the responsibility rests on the individual, and under present conditions he is unable to meet it This inability exists on the fact that the majority of wage earners do not receive sufficient wages to provide for proper living conditions and because the present methods of disease prevention and cure are expensive and sickness is most prevalent among those who are least able to purchase health The worker is expected to provide for almost certain contingencies in the future when he lacks means of existing adequately in the present. If a rapid increase of wages were made to all classes of workers to a standard which would permit proper living conditions and adequate medical attention, it is believed it would solve the problem but there is no indication that this will occur The remedial measures for existing conditions must, therefore be based on the cooperative action of those responsible for conditions, must be democratic in maintenance, control and administration, must distribute costs practicably and justly, and must provide a powerful incentive for sickness insurance.

A system of sickness insurance is the most feasible single measure This conclusion is based on the following

> The losses occasioned by the wage earner's sickness affect employee employer and community all of whom share in the responsibility Insurance is the recognized method of distributing loss so as to reduce individual risk to a minimum
>
> The strongest incentive—that of lessening cost—is given to efforts to diminish frequency and seriousness of losses, sickness insurance in this respect is a preventive measure of a positive and direct kind The lower the morbidity and mortality rates the less the amount necessary for benefits and the lower the insurance rate
>
> Sickness insurance is no longer experimental in the United States there being several million workers so insured The cost would be no greater than at present. The conclusion appears sound that medical benefits of $7 per week for a period not exceeding twenty-six weeks in one year, and death benefits of $200 can be provided at a total cost of 50 cents per week per insured person Budgetary studies of large numbers of workingmen's families show that under present conditions from 25 to 50 cents a week, up to 70 cents and even $1 86, is spent for little more than burial insurance Workers would thus receive immeasurably greater benefits for much less than they now pay"

It is suggested that the commission recommend a federal system of sickness insurance constructed along the lines here briefly summarized [14]

1 *Membership*—The membership shall comprise all employees of persons, firms, companies and corporations engaged in interstate commerce, or whose products are transported in interstate commerce, or which may do business in two or more states The employees of interstate establishments to be permitted to be insured if they so elect, under regulations to be prescribed by the commission

2 *Fund*—The fund is to be created by joint contributions by employees, employers and the government, the last named sufficient for expenses of administration Such contributions should probably be in the proportion of 50 per cent from workers, 40 per cent from employers and 10 per cent. from the government Individuals or groups desiring larger benefits may arrange to make larger payments, and the rate in any trade, industry or locality may be reduced where conditions so improve as to make a lower rate adequate The contributions are to be secured through taxing each interstate employer a certain amount weekly for each employee, the part contributed by workers to be deducted from their wages, thus using the regular revenue machinery of the government

3 *Benefits*—Benefits to be available for a limited period in the form of cash and medical benefits during sickness, nonindustrial accidents and childbearing, death benefits to be of limited size and payable on presentation of proper evidence

4 *Administration*—The administration of the insurance funds is to be carried out by a national sickness insurance commission The national commissionn should be composed by presidential appointment with senate confirmation, of a director (who would be chairman), representatives of employers and representatives of employees in equal ratio, and, as ex officio nonvoting members, the federal commissioner of labor statistics and the Surgeon-General of the Public Health Service. The commission should be empowered to supervise all funds and determine their character and limits of jurisdiction, promulgate all regulations necessary to enforce the act, establish and maintain hospitals, maintain staffs of medical examiners, specialists, dentists and visiting nurses, provide for medicines and appliances, make contracts with local physicians, cooperate with local funds and health authorities in disease prevention, and provide for collecting actuarial data

Correlation of the insurance system with the medical profession the lack of which has been a serious defect in German and British systems, is absolutely necessary Contracts with physicians should allow to each a per capita payment for the insured persons under his care, the right of selection of physician to be retained by the insured For the signing of certificates entitling the insured to benefits and for treating the insured in hospitals, the surgeon-general should detail physicians from the Public Health Service, their entire time to be given to these and other duties (consulting with local physicians, enforcing federal laws and regulations, and cooperating with local authorities)

ADVANTAGES OF A GOVERNMENTAL SYSTEM

Warren and Sydenstricker,[15] in their report on "Health Insurance Its Relation to the Public Health" further point out that the democratic character of an effective health insurance system is most pronounced in a governmental system The wage earner has a more real basis for feeling that the benefits he receives are rights to which he, as a citizen is entitled A governmental system removes all trace of the taint of charity which so often accompanies employers' welfare work and which might accompany a private plan supported in part by employers Certain features necessary to the success of health insurance which are obnoxious to this benefit The seven funds that gave pensions for permanent disability gave these pensions to about 1 per cent of their members during the year previous Of course, if figures on similar points could be obtained today, there would be a great variance with these figures of ten years ago, especially in the number of members in the trade unions Whether or not the ratio of temporary disability and permanent disability would be the same, it is impossible to say

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[14] Final Report Commission on Industrial Relations 1915

[15] Warren B S and Sydenstricker Edgar Health Insurance Its Relation to the Public Health Bull. 76 Treasury Department, U S P H S pp 63-64

In considering the amount of temporary disability benefits, the recent passage of the workmen's compensation laws has modified greatly statistics obtainable on this point. It is interesting, however, to note that *of the 530 funds included* in the report, 346 paid benefits on account of temporary disability Four of those paid for disability resulting from sickness only, thirty-eight for accident only, and 304 for disability resulting from either sickness or accident The amount paid usually ranged from $2 to $5 a week The time for which these benefits were paid varied greatly in the funds, some funds having first, second and third periods for which they paid the disability The majority of the funds limited the periods to a stated number of weeks in each year or days in each month, while others limited them to disability In twenty-three funds the period for which payments are continued is unlimited Sixty-one of the 346 paying temporary disability limit the payments to thirteen weeks in each year, fifty-three limit them to a period not exceeding ten weeks in each year In some instances the duration of the period is determined by the age of the beneficiary when he joined the organization, in others the payments are continued to the end of the working season without regard to the time *of the beginning of the disability There is further variation* in the length of membership required before a member is entitled to temporary disability benefit In 157 of the 346 funds, members do not become beneficiary until six months from date of admission, in seventy-one, however, they are entitled to benefits at once In sixty a three months' membership is required, twenty-four funds require one year membership

To prevent malingering and valetudinarianism or fraud of any kind, some sort of supervision is exercised over members who claim benefits on account of temporary disability Of the 346 funds investigated, 279 require that patients be visited by sick committees, 257 require physicians' certificates, in twenty-seven, physicians' certificates may be required if deemed necessary, eight require visits by some officer of the society Many of the funds have more than one form of supervision, that is, more than 200 of the 257 funds which require physicians' certificates also require visits by sick committees

Many of the trade unions place certain restrictions on the action of members during the time they are drawing pensions for temporary disability In twenty-seven funds they are forbidden to use intoxicating liquors to excess, in one to frequent drinking places after 9 o'clock at night, and in twelve to frequent such places at all In fifteen they are forbidden to leave home at night, and in eighteen to leave home at any time There are various other restrictions, the violation of which usually causes a discontinuance of the benefits These funds vary greatly as to a continuance of benefits after the limit allowed is reached In 214 of them, members who draw benefits for the entire period are entitled to no more benefits for the same year, but in twenty-three of these there is provision for extending the time by vote of the members, and the twenty-three funds there is no limit to the time for which benefits may be paid In fourteen funds, after benefits are paid for the maximum period, no more are paid for the same disability

The amount of death benefit paid by the trade unions varies greatly In twenty-four funds there are more than one class of members, and each class is entitled to a different amount of death benefit In 322 of the funds mentioned here which have but one class of death benefit and pay a stated amount, benefits range from $375 to $20, about one third of the number pay $100, in eighty-two funds the benefit paid is $50, in fifty funds the benefit paid is $75 An amount based on membership is paid by fifty-one funds Ten of these funds pay an amount equal to 50 cents per member, and thirty-one pay $1 per member Ten funds have provisions for paying benefits to members who are permanently disabled by chronic illness or by the loss of some part of the body How much the latter clause may be affected by the workmen's compensation law it is impossible to say In four of these ten the benefit payments were made in lump sum, the amount in one being $40 and in another $100 In the third an amount is paid equal to 50 cents per member for certain disability by accident, such as one hand and one foot, or $100 per member for the loss of both hands, eyes or feet. In the fourth, the amount of benefit depends on the length of membership of the beneficiary, *ranging from $50 for six months'* membership up to $100 for five years' membership In six funds the benefit payment is in instalments, the period for which payments are continued being unlimited in each case. The amount paid is $4 per week in one fund, $3 in another, and $1 in another $10 per month in two, and $1 per month in the other These statistics are sufficient to give an idea of the kind and amount of benefits paid by these funds

Besides the benefits on the death of members, eighty-six of the funds have provisions for paying benefits on account of the death of a wife of a member, and one fund for female members pays benefit on the death of the husband of a member, the amounts paid varying from $12 50 to $112 50 The *most common benefit is $50 Forty of these 530 funds have* further provision to pay benefits to members on account of death of dependents other than wives, these dependents being children, parents, brothers, sisters, fathers-in-law, mothers-in law and other relatives Few funds include all of these, and about one half of the funds pay only for children, the amounts of the benefits varying from $10 to $100 Most of the funds pay more than one amount of benefit, the amounts varying according to the age or relationship of the dependent To give some idea of the amount paid during the year 1907 by the 530 funds investigated, Table 7 is self-explanatory

TABLE 7 —AMOUNTS PAID BY FUNDS

Kind of Benefit	Number of Funds		Amount Paid During Year
	Having Provision for Paying Benefits	Paying Benefits During Year	
Temporary disability	346	334	$198,189 50
Permanent disability	10	4	20,964 00
Death of member	401	311	181,643 81
Unemployment	10	8	29,417 60
Death of member's wife	86	47	6,470 50
Death of other dependents	40	32	3,859 00
Expenditure for hospitals	7	7	16,261 50
Total			$457,493 81

EMPLOYERS' ORGANIZATIONS

In the class of associations which the employers have organized for the benefit of employees are the railroad relief funds *and the establishment funds Of the first, in 1907,* the United States Bureau of Labor could only find fifty relief funds connected with thirty-seven railroad systems Thirty-six of these funds are insurance funds to which the employees contribute all or part of the revenues, fourteen are pension systems maintained entirely by the companies Of the 500,000 eligible employes, 300,000 were members of these funds Thirty-one funds pay benefit for temporary or *permanent* disability, thirty-four for death, and one for superannuation For thirty six of these insurance funds there is a managing board, some members of which are chosen by the employees In the majority of circumstances these boards pass on the claims to benefits Twenty-two of the funds are managed by the employees alone, and fourteen jointly by employees and company In each of these fourteen, some officer of the company is the supervising officer of the fund, the company often taking charge of the funds and guaranteeing the benefit payments The companies generally make substantial contributions

In thirty-three of these insurance funds the membership is optional The maximum age for admission to membership is generally the same as the company's service age limit, in eighteen funds it is 45 years, in four, 50, in one, 55, and in three, 60 years Eighteen of the funds require a medical examination for applicants, and nine others require that the applicant be in good health Three funds exclude colored employees In ten funds, persons leaving the service forfeit membership All other funds permit members leaving the service to retain membership or natural right death benefit, that is, death from natural causes Eight funds managed jointly contain provisions in their constitutions releasing the funds from all claims for benefits whenever a suit for damages is brought against the employing company In these eight funds the companies make contributions as follows one company duplicates the employees' contributions, one contributes 20 per cent. as much as the employees, three, 15 per cent , one 10 per cent , one, 2 per cent., and one, less than 1 per cent. Dues and assessments are usually paid in advance and deducted from the pay of the employees Thirty-one funds pay benefit for temporary disability The periods during which benefit payments may continue range from six to fifty-two weeks in one year The payments range from $2 50 to $20 per week. Usually after the first fifty-two weeks, the payments are half the original rates This unlimited period makes these payments in reality a permanent disability benefit Beneficiaries are visited usually each week by the sick committee and must furnish a doctor's certificate as often as required. Benefits are forfeited when a disability is caused or prolonged by carelessness, intemperance, immorality or unlawful conduct

Of the thirty-four funds paying death benefits, seventeen pay sums from $50 to $400, the other seventeen pay regular benefits of a maximum from $1,000 to $3,000, and of these seven (in all of which the company has a controlling interest) have optional additional death benefits for which additional dues are paid The highest total insurance which may be taken out in any fund is $6 000

TABLE 8 — UNITED STATES FRATERNAL ORDERS *

Year	Number of Orders	Assessments (Millions)	Total Income (Millions)	Claims Paid (Millions)	Total Disbursements (Millions)	Assets End of Year (Millions)	New Business (Millions)	Number of Certificates in Force End of Year (Millions)	Amount in Force End of Year (Millions)
1914	498	$125	$144	$ 98	$121	$189	$1 079	7	$9 171
1913	509	129	144	101	121	183	1,065	8	9 622
1912	397	123	132	95	114	163	1,023	9	9 472
1911	396	117	130	84	113	148	1 200	10	9,839
1910	497	114	128	92	110	129	1 331	8	9,562
1909	645	82	120	89	104	117	1,203	7	8,920

* American Year Book for 1915, p 377

Besides the continuation of temporary disability or permanent disability, five funds pay lump sum benefits for various permanent disabilities ranging from $100 to $6,400, and one pays a monthly benefit of $5 To the fourteen railroad pension systems the employees do not contribute, they are all controlled and maintained by the companies These pensions are usually based on age and length of service, monthly payments for life usually being made on 1 per cent. of the average monthly wage for the ten years next preceding retirement for each year of service In most of the systems, pensions for superannuation are granted to employees retired at 65 or 70 years of age for from ten to thirty years of service and after incapacity of employees of from 60 to 69 years of age of like service The age limit for entering the service of these companies is usually 45 years The pensioners are allowed to engage in gainful occupations, but may not reenter the company's service.

ESTABLISHMENT AND NEEDS

The greatest growth probably in recent years has been in the formation of establishment funds or special insurance funds in which the employees of a single commercial manufacturing establishment or business form a more or less complete social insurance scheme for their protection Some of these are contributed to only by the employees, some are joint contributions of employer and employee, some funds are run entirely for the employees by the employer The membership in some is voluntary, in others, compulsory The met contribution varies, and the method of management varies It is impossible to go into the enormous details necessary to describe the many kinds of funds and benefits given under the separate establishments in this country The benefits vary all the way from sick benefits and death benefits up to the complete systems of accident and sickness insurance, maternity benefits and hospital benefits, permanent disability and old age pensions, some establishments having practically the most modern, complete social insurance systems with compulsory insurance, or all members of the establishment forced to go in and protect themselves These are in some cases connected with welfare work among the families of the employees, and with district nursing

There has been a growing realization in this country that a cheerful willingness to work goes with a healthy mind in a healthy body Public hygiene in communities and the full benefit of the protection that social insurance gives has been sought and used as a wise business policy A state wide health insurance would, in many instances, only carry out what has already been accomplished in many of these establishment funds

FRATERNAL SOCIETIES

There are other industrial benefit societies which differ from labor unions and establishment funds in that the membership, although composed generally of wage earners or of those on small salary, is not as a rule dependent on membership in any particular union or employment in any particular establishment The management of these societies and the administration of their affairs is entirely in the hands of the members It is also true that the membership of some of these societies is limited to the employees of a certain industry, the membership of others is limited to employees of certain industries of a certain locality Other such funds limit their membership to the employees of any industry of a certain locality while others extend their membership to the employees of any industry without reference to locality Some of these societies have restricted their membership to males while others admit both males and females In others, the membership is composed exclusively of women Some of these societies provide cash benefits in case of sickness, injury and death, some for sickness and injury only, and some pay only death benefits

In 1914, in 122 mutual sick benefit associations operating in the United States, the number of certificates in force at the end of the year was 1 072,764 Their total income was $7,246,000, and their premiums $646,588, their total expenditures were $6,169,000, they had paid to agents and for medical examination $1,587,000, and the expenses of management were $1,608 000 Table 8 best expresses the number of fraternal orders in the United States and the amount of business done by them

It is interesting to note that during the past year two of the oldest fraternal societies realized that they had become insolvent and were liquidated These societies had been in existence for over forty years and had been managed with integrity and economy, but the inadequate rates and the gradually increasing cost, with the increase in age of the members and the steady withdrawal of sound risks, caused their insolvency The assets amounted to a little over one half of the accumulated death claims in one case and something more than half in the other In the case of both these societies, however having received nothing in the liquidation except to private health insurance plans—for example, compulsory membership—are largely removed when health insurance is a public institution and a governmental affair Furthermore, experience has shown that there is a much higher degree of efficiency in management, and at much less cost, in government than in private health insurance plans The necessity for maintaining large reserves, providing profits, paying high salaried officers, soliciting agents, commissions, and general duplication of overhead expense is done away with in a governmental system The cost of administration is further reduced since already existing machinery for collection of the funds can be employed through the taxing power of the government, and a less complicated and elaborate organization of administration is necessary

It is further pointed out that it is a significant fact that the experience of European nations with health insurance has shown governmental systems to be the only systems which accomplish the purposes desired In European countries in which private health insurance plans existed, or in which there were private systems subsidized by governments, the experience has been that discouragingly small enrolments in membership resulted and that the workers who were on the border line of poverty and in the greatest need of insurance were the very ones who did not insure Great Britain, when it adopted a system of health insurance in 1911, did not subsidize private plans, as some of the European nations had done, but advanced at one step to a highly developed form of a governmental system Several other nations which subsidized private insurance plans have rejected that method and adopted a governmental system Governmental health insurance systems have unquestionably come to be recognized as the most satisfactory method of dealing with the problem of sickness among wage earners

SICKNESS SURVEY OF ROCHESTER, N Y

In studying any system of health insurance in this country, the lack of morbidity statistics has been a great drawback in calculations of the ratio of expense and the probable occurrence of disease No country, however, has had morbidity statistics until compulsory health insurance was put in force There have been two studies in New York State recently which show, in certain localities, the occurrence of sickness and, in one instance, the possibilities of existing institutions to provide adequate care for the sick both in their homes and in hospitals The Metropolitan Life Insurance Company made one of these investigations[16] in the city of Rochester during the week of Sept. 13, 1915, 7,638 families were reached, including 34,490 persons This was 14 per cent of the total population of Rochester and was considered a sufficiently large sample to give a fair degree of accuracy in judging the measure of the amount of sickness in the industrial community as a whole It is stated that an analysis of such items as occupation and the general characteristics of the families as to size confirm this conclusion

Of the 789 cases of sickness found, 82 8 per cent were unable to work, 8 8 per cent were able to work though sick, and the ability to work was not specified in 8 4 per cent It is further interesting to note that there were 356 men sick and 442 women Of the men, 83 4 per cent were sick and unable to work and, of the women, 82 4 per cent Of these, 24 7 per cent of the men were sick in bed and 29 9 per cent of the women, and of these, 13.2 per cent of the men and 19 9 per cent of the women were at home There were up and about, though sick, 58 7 per cent of the men and 52 5 per cent of the women, sick but able to work, 9 per cent of the men and 8 6 per cent of the women Taking adults of 15 years and older, it was further found that the rate of sickness and inability was 27 3 per thousand for males and 31.2 for females, including all sicknesses For sickness involving incapacity for work, the rates for ages of 15 and over were 23.2 per thousand for males and 25 7 per thousand for females Broadly speaking, over 2 5 per cent. of the working population canvassed were sick and unable to work at the time of the survey The rates of sickness among females incurring disability were distinctly higher than for males up to the age of 54, from 55 onward the rate of sickness in males exceeds that of females This is especially marked at the age period between 25 to 34, when twenty-five cases of childbirth and its complications increased the rate This rate, even with an allowance for puerperal conditions, is in excess of that for males at the same age period

The chief causes of disability were seventy-three cases of rheumatism, and tuberculosis, cerebral hemorrhage and insanity, in the order named The transmissible diseases, such as typhoid and acute infectious diseases of children, were relatively few, there being but four cases of the former and sixteen of the latter

Of the 661 persons unable to work, eight were incapacitated for one day, forty-one, or 6 per cent, for less than one week, and 149, or 22 5 per cent, for less than one month On the other hand, persons able to work show a smaller proportion of cases under one month in duration. Rheumatism, neuralgia, neuritis, neurasthenia and headache, which constitute the bulk of the cases sick and unable to work, were in most instances longer than one month in duration and influence the figures of the entire group, a large percentage of the cases being of longer duration, 128, or 19 4 per cent, lasting between one and three years

Without distinction of the extent of disability, in 61 per cent of the cases of sickness the patients had a physician in attendance, 50 per cent of the total sick outside of institutions were in the care of physicians, but only 45 3 per cent. of those sick but able to work were thus cared for, 63.8 per cent of the sick persons incapacitated for work employed physicians or were being treated in institutions There was but slight variation for sex in these figures

The sickness rates of this survey are minimal The survey was made in a month which, for Rochester, has less mortality than the average month for the year The figures, therefore, are conservative, and on the basis of the foregoing sickness rate, it may be concluded that throughout the year there are at least 2,147 males constantly sick and 2,400 females In adults of 15 years of age and over, the male population of Rochester is calculated at 92,552, and of women, 93,392

Small as these statistics are, they present practically the same percentage of sickness in relation to sex and age as do the statistics of the Leipzig Society and the Sickness Insurance Funds of Austria

SICKNESS SURVEY OF DUTCHESS COUNTY, N Y

Of special interest in connection with health insurance is a study of sickness in Dutchess County, in New York, made by the State Charities Aid Association This study was an attempt to secure reliable data in regard to sickness which had occurred in certain selected communities in Dutchess County during a sixteen month period in 1912 and the first four months of 1913 It was made at the request of the trustees of the Thomas Thompson Trust. The report says

> "It was important to have more exact knowledge of the sickness which had occurred in the county, in order to draw trustworthy conclusions as to how adequately or inadequately the existing public and private facilities were meeting the needs of the community With the exception of certain contagious diseases, reported incompletely, at best, to the health officers, there are no public records of sickness in Dutchess County—a condition true of the rest of the country as well The method usually employed of estimating the amount of sickness is to assume a certain sickness rate for each disease, based on the recorded death rate for that disease This method is arbitrary and, of course, fails to throw any light on the kind of care the patients received or on the conditions surrounding or contributing to their sickness
>
> "It was planned in this investigation to secure, directly from the families in which it had occurred, as full and accurate data as possible concerning sickness, including the medical and nursing service obtained, its efficiency and cost, the need of and the demand for domestic assistance in the homes where sickness existed, and the efficiency with which the demand was met It was believed that data might thus be obtained which, when analyzed, would point to improvements in the methods of caring for the sick and of

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[16] Frankel, L K., and Dublin, L I Community Sickness Survey, Pub Health Rep, Feb 25, 1916

preventing disease. The attending physician was consulted either personally or by letter about each recorded case of sickness."

It was not always possible to obtain accurate data even with the best of cooperation among the people and physicians. In the field which was selected in Dutchess County it must be taken into consideration that the line of hills runs north and south, dividing the eastern and western sections, so that communication between them is difficult. The section to the west of the hill, toward the Hudson River, on which the town of Poughkeepsie is situated, contains 88 per cent. of the population of the county, and this section was chosen for the field of inquiry. The towns of Rhinebeck, Milan, Stanford and Clinton are typical rural communities with a total population of 7,223. Stanford is a country town of about 1,520, of whom 700 live in two adjoining villages and the remaining population is scattered around the dairy farms throughout the hills. Stanford has one resident physician.

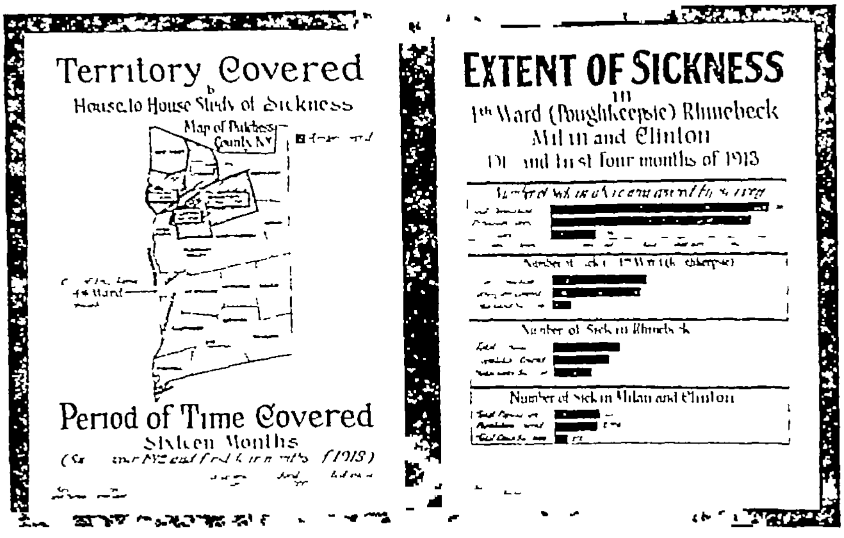


Chart 1.—Details of sickness survey.

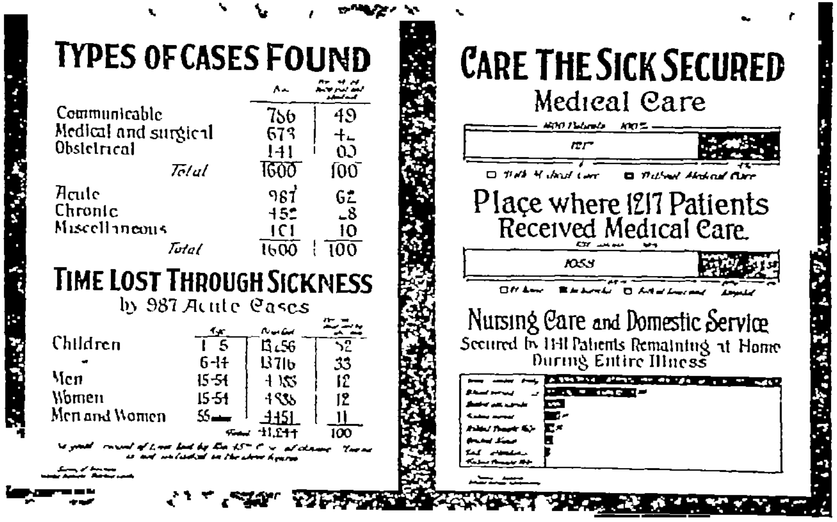
The towns of Milan and Clinton are typical farming sections. Milan has a population of 893 and Clinton of 1,278. In none of these towns is there district or school nursing. The water supply of these towns is drawn from private wells. A relatively small number of houses are connected with cesspools, and the others still have only surface drainage with the old fashioned privy with a dug vault.

The same may be said of Rhinebeck Town, and an epidemic in the village furnished seventeen out of twenty-nine cases of typhoid. The water supply in this town is from wells and a public water supply from wells a few miles out of town.

The fourth ward of Poughkeepsie contains a population of 4,580, which is 16 per cent. of the population of the city. It contains a representative part of the main business section of the city, a wealthy residence section, and a fairly proportionate number of the homes of the poor and of those of moderate means. The ward contains an average number of the colored and foreign population of the city. Poughkeepsie has had a filtration plant connected with its water system for some years. The city's water supply is drawn from the Hudson River. Its sewage is emptied into the same river.

The term "sickness" includes only that which was so serious that it necessitated or should have necessitated the patients going to bed or securing medical aid. Slight ailments were not taken into account. By the term "adequate service" is meant that service which results in the patient's recovery when recovery can be expected, and which is of such a character that neither the patient nor the community incurs avoidable risks.

Of the 1,600 cases of sickness which occurred, 305 were men, 605 were women, and 690 were children; 506 occurred among those who were able to pay for any desired service, 882 among those able to pay for ordinary service, such as ward service in a hospital, 212 occurred among those unable to pay for any service; 920 of these obtained adequate service, 620, inadequate. In the fourth ward of Poughkeepsie, 13 per cent. of the patients were cared for in the hospitals, in Rhinebeck, 10 per cent., and in Milan and Clinton, 3 per cent. It is interesting to note that only 55 per cent. of the 1,441 patients who remained in their homes throughout their sickness were cared for adequately, 45 per cent. received inadequate care. Only 80 per cent. of the hospital patients were cared for adequately, 20 per cent. were cared for inadequately, mainly because the patients returned to their homes before their homes were ready for them, so that proper convalescence was impossible; the care while in the hospital was adequate. Combining home and hospital care, 57.5 per cent. of the recorded patients were cared for adequately, and 42.5 per cent. inadequately.



TYPES OF CASES FOUND

Communicable	786	49
Medical and surgical	673	42
Obstetrical	141	09
Total	1600	100
Acute	987	62
Chronic	452	28
Miscellaneous	161	10
Total	1600	100

TIME LOST THROUGH SICKNESS
by 987 Acute Cases

Children	1-5	13,256	32
"	6-14	13,716	33
Men	15-54	4,155	12
Women	15-54	4,836	12
Men and Women	55—	4,451	11
	Total	41,244	100

Chart 2.—Details of sickness survey.

It has been said that the very rich or the very poor are well cared for in the big cities, and those possessing moderate means find inadequate accommodation during illness. It is interesting to note that of the 506 patients of this study who could have paid for any necessary service, 81 per cent. were cared for adequately and 19 per cent. inadequately. Of the 882 patients of moderate means who could not have stood any prolonged drain on their income, 50.5 per cent. received adequate care and 49.5 per cent. inadequate. Of 212 patients who could not pay for any medical or nursing service, 32 per cent. received adequate care and 68 per cent. inadequate. It is also to be noted that of the 680 cases out of the total number of 1,600 recorded who were inadequately cared for, 21.3 per cent. occurred among those who were unable to pay for any care, 14.4 per cent. were among those who were able to pay for any necessary service, while 64.3 per cent. were among those who could pay ordinary charges but not for any length of time. In other words, it is stated that in nearly 79 per cent. of the cases in which there was found to be lack of proper services, poverty was not a controlling cause of that lack There were in most cases no facilities for services to be had, and in other cases there was a lack of proper knowledge of what service to seek for and how to seek for it

Four hundred and forty two patients, that is, 28 per cent of the 1,600, could not have been cared for adequately in their own homes Two hundred and thirty-six of these—15 per cent of the total 1,600—who suffered from noncontagious diseases, could have been cared for adequately only in hospitals because of the nature of their cases from a medical standpoint The other seventy-three patients, 4 per cent of the total, who suffered from contagious diseases, needed hospital care for the same reason One thousand, one hundred and fifty-eight, or 72 per cent of the total, could have been cared for adequately in their homes Of these, 1,128, or 97 per cent, required efficient medical care, while the condition of thirty patients, 3 per cent, was such that extra medical care or nursing was necessary One hundred and sixty-five patients should have been cared for by a trained nurse Of these, thirty-three required resident service and 132 visiting service In 115 instances, the services of an untrained nurse or attendant were necessary In 131 homes the adequate care of the patient implied the employment of a resident domestic helper, and in fifteen homes the services of a domestic helper on part time Twelve per cent of the resident service involved should have been trained, and 88 per cent untrained attendants or domestic helpers Of the visiting service essential, 86 per cent should have been trained, and 14 per cent could have been untrained

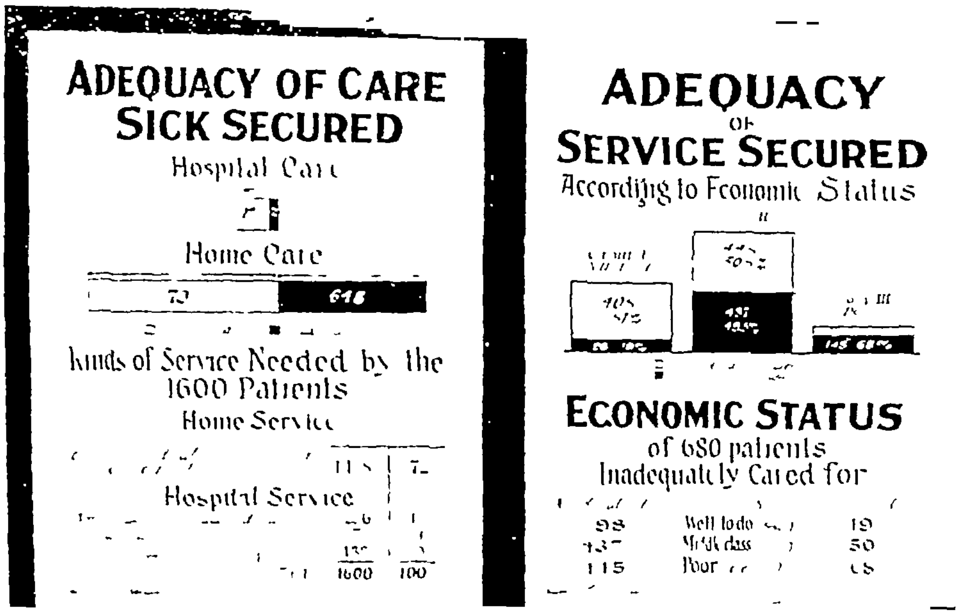


Chart 3 —Details of sickness survey

The importance of the findings of the house to house canvass of selected districts of Dutchess County lies in the fact that there is every reason to believe that the amount of inadequately cared for sickness discovered is typical of what one may expect to find in many other communities through the state and nation Here is a small group made up of a small city and several country communities in normal times—no unusual epidemics, no extraordinary social or industrial conditions—during a period shown by reported deaths, reported cases of contagious disease, and the unanimous testimony of physicians to have been a light year for sickness The accompanying charts give these facts graphically, and the situation in Dutchess County can be well considered as typical for the average condition of affairs outside of big cities Among those of moderate incomes, the majority of whom probably would come under health insurance, the chances are even whether or not a person at present receives adequate care for sickness Among the poor the chances are two to one against their receiving proper care It is a noticeable feature that 24 per cent, or practically one fourth of the 1,600 patients here sick, received no medical care whatever

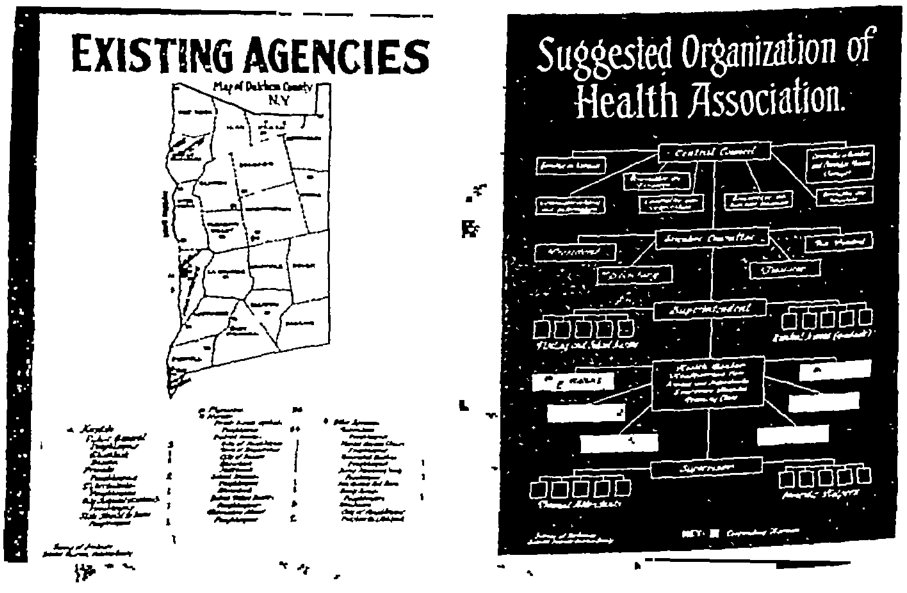

EXISTING AGENCIES
Map of Dutchess County N.Y.
Suggested Organization of Health Association.
Central Council
Superintendent
Supervisor

Chart 4 —Findings and suggested organization

In general, after enumerating all the agencies now acting in the county, it is found that in most instances these agencies are doing their work well in their separate fields Organization, however, is needed to bring about cooperation on the part of existing agencies, provide for facilities that are now lacking and stimulate the provision of such new means for the care of the sick and the prevention of disease as may be found desirable A county health association is therefore recommended as the form of organization which is desirable This might at first be a private organization and might remain such permanently, although many of its activities from time to time might be taken over by public agencies, which is not an unusual line of development It is further recommended that the proposed organization should cover the entire county, but to begin with it would be more feasible to organize these facilities in one or two of the districts in such a way as to admit of gradual growth and extent of the organization throughout the county without radical change The report states that "the health association would have as its objects the coordination and development of existing facilities of the community for the care of the sick and the prevention of disease, in order to make them thoroughly efficient and readily available to all, and the development of such additional facilities as study and experience may indicate are needed The association, however, cannot attain these objects unless it has the sympathetic interest and cooperation of the physicians of the county Their interest and cooperation must underlie all its work and are vitally essential to its success

In order to do its work most efficiently, the association should cooperate with all the public and private medical and social service agencies at work in the county, as follows

A *Remedial Work*—1 Establishing an efficient system of medical, nursing and social service for the care of the sick in their own homes

2 Securing the cooperation of the existing hospitals Stimulating the provision of additional facilities where and when clearly needed

3 Maintaining a proper distribution of patients as between home and hospital care, based on a study both of the patient s disease and of his social and economic circumstances

B *Preventive Work*—1 Educating the individual (*a*) as to personal hygiene and the observation of its laws, (*b*) as to the nature of communicable diseases and the means of avoiding them as well as the necessity of collective action to safeguard health and avert danger from these sources, and (*c*) as to the bad housing and unfit social and industrial conditions in which he lives and the means that can be employed to improve those conditions

2 Securing the adoption and strict enforcement of public health measures, i e., public hygiene"

Further details of this interesting investigation must be obtained from the report itself, as space does not permit further discussion This work is best explained in the graphic charts

Proposed Health Insurance Act

For the past year a committee of the American Association for Labor Legislation has been working to obtain a definite measure to prevent as embodying certain health insurance standards that could be modified to meet the situation in the various states of the Union The following health insurance standards have been adopted, and the following tentative draft of a health insurance act has been agreed upon as a standard act which could be modified as the exigencies of the various states required It is noticeable that in this draft of a bill the medical and surgical requirements are not fully formulated This has been intentional because it was deemed necessary that the physicians of any state should be required to consult with the authorities in formulating the regulations under which they are to work.

Following are the health insurance standards and the draft of a health insurance act

HEALTH INSURANCE STANDARDS

1 To be effective health insurance should be compulsory on the basis of joint contributions of employer, employee and the state

2 The compulsory insurance should include all wage workers earning less than a given annual sum where employed with sufficient regularity to make it practicable to compute and collect assessments Casual and home workers should as far as practicable be included within the plan and scope of a compulsory system.

3 There should be a voluntary supplementary system for groups of persons (wage workers or others) who for practical reasons are kept out of the compulsory system

4 Health insurance should provide for a specified period only provisionally set at twenty six weeks (one half year) but a system of invalidity insurance should be combined with health insurance so that all disability due to disease will be taken care of in one law, although the funds should be separate.

5 Health insurance on the compulsory plan should be carried by mutual local funds, jointly managed by employers and employees under public supervision In large cities such locals may be organized by trades with a federated bureau for the medical relief Establishment funds and existing mutual sick funds may be permitted to carry the insurance where their existence does not injure the local funds but they must be under strict government supervision

6 Invalidity insurance should be carried by funds covering a larger geographical area comprising the districts of a number of local health insurance funds The administration of the invalidity fund should be intimately associated with that of the local health funds and on a representative basis

7 Both health and invalidity insurance should include medical service, supplies necessary nursing and hospital care. Such provision should be thoroughly adequate, but its organization may be left to the local societies under strict governmental control

8 Cash benefits should be provided by both invalidity and health insurance for the insured or his dependents during such disability

9 It is highly desirable that prevention be emphasized so that the introduction of a compulsory health and invalidity insurance system shall lead to a campaign of health conservation similar to the safety movement resulting from workmen s compensation.

HEALTH INSURANCE TENTATIVE DRAFT OF AN ACT

Section 1 Title.—This chapter shall be known as the Health Insurance Act.

Section 2 Definitions—When used in this act

Commission means the Social Insurance Commission.

'Fund means a local or trade fund as the case may be.

' Society means an approved society

'Carrier" means the society or fund which carries the insurance

Insurance" means health insurance under this act

Disability" means inability to pursue the usual gainful occupation

Section 3 Compulsory Insurance.—Every person employed in the state at manual labor under any form of wage contract, unless exempted under Section 4 of this act, and every other employee whose remuneration does not exceed $100 a month, shall be insured in a fund or society, except employees of the United States and except employees of the state or of municipalities for whom provision in time of sickness is already made through legally authorized means which in the opinion of the Commission are satisfactory

Section 4 Home Workers and Casual Employees—Special regulations shall be made by the Social Insurance Commission for the insurance of home workers and casual employees, or for their exemption from compulsory insurance.

Section 5 Voluntary Insurance—Self employed persons whose earnings do not exceed $100 a month on an average, persons formerly compulsorily insured who, within one year from the date on which they cease to be insured apply for voluntary insurance members of the family of the employer who work in his establishment without wages may insure themselves voluntarily in the local or trade funds of the locality in which they live and of the trade at which they are employed, subject to conditions of this act

Section 6 Cases In Which Paid—Insured members shall receive benefits in case of any sickness or accident or for death, not covered by workmen s compensation

Section 7 Minimum Benefits—Every carrier must provide for its insured members as minimum benefits Medical surgical and nursing attendance medicines and surgical supplies cash benefits maternity benefits funeral benefits medical and surgical attendance and medicines for dependent members of their families

Section 8 Beginning of Right—Insurance with the exception of maternity benefits begins with the day of membership The maternity benefits shall be payable to any woman insured against sickness for at least six months during the year preceding the confinement, or to the wife or widow of any man so insured

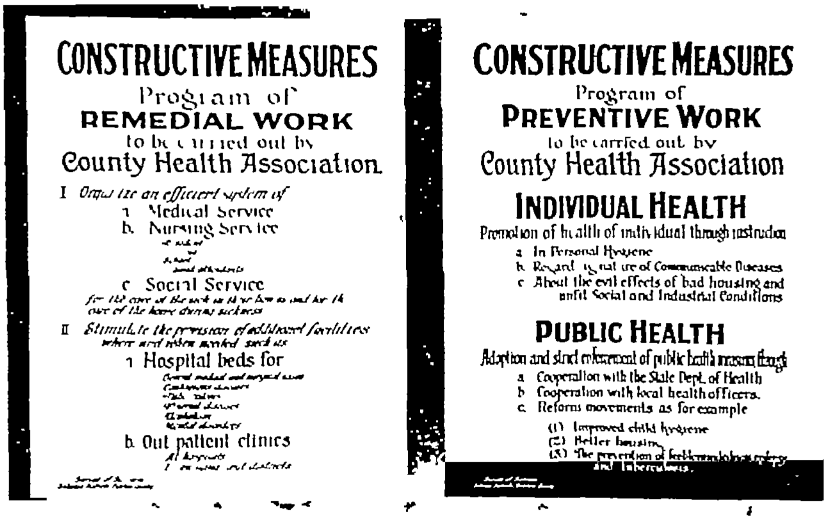

CONSTRUCTIVE MEASURES
Program of
REMEDIAL WORK
to be carried out by
County Health Association
I
a Medical Service
b. Nursing Service
c Social Service
II
a Hospital beds for
b. Out patient clinics
CONSTRUCTIVE MEASURES
Program of
PREVENTIVE WORK
to be carried out by
County Health Association
INDIVIDUAL HEALTH
Promotion of health of individual through instruction
a In Personal Hygiene
b Regarding nature of Communicable Diseases
c About the evil effects of bad housing and unfit Social and Industrial Conditions
PUBLIC HEALTH
a Cooperation with the State Dept. of Health
b Cooperation with local health officers.
c Reform movements as for example
(1) Improved child hygiene
(2) Better housing
(3) The prevention of

Chart 5—Constructive measures suggested by State Charities Aid Association

Section 9 Medical Surgical and Nursing Attendance.—All necessary medical surgical and nursing attendance and treatment shall be furnished by the carrier from the first day of sickness during the continuance of sickness but not to exceed twenty six weeks of disability in any consecutive twelve months In case the carrier is unable to furnish the benefit provided for in this section it must pay the cost of such service actually rendered by competent persons at a rate approved by the Commission.

Section 10 Medical Service.—The carriers, subject to the approval of the Commission shall make arrangements for medical surgical and nursing aid by legally qualified physicians and surgeons and by nurses or through institutions or associations of physicians surgeons and nurses Provision for medical aid shall be made by the carriers by means of either

1 A panel of physicians to which all legally qualified physicians shall have the right to belong and from among whom the patients shall have free choice of physician subject to the physician s right to refuse patients on grounds specified in regulations made under this act provided however that no physician on the panel shall have on his list of insured patients more than 500 insured families or more than 1 000 insured individuals.

2 Salaried physicians in the employ of the carriers among which physicians the insured persons shall have reasonable free choice

3 District medical officers, engaged for the treatment of insured persons in prescribed areas.

4 Combination of above methods.

Section 11 Medical Officers—Each carrier shall employ medical officers to examine patients who claim cash benefit, to provide a certificate of disability and to supervise the character of the medical service in the interests of insured patients, physicians and carriers

Section 12 Medical and Surgical Supplies—Insured persons shall be supplied with all necessary medicines surgical supplies dressings eyeglasses trusses crutches and similar appliances prescribed by the physician, not to exceed $50 in cost in any one year

Section 13 Hospital Treatment for One Perso —Hospital or sanatorium treatment and maintenance shall be furnished upon the narianism The physicians on their part have a right to demand a fair remuneration for services given and must agree to give willing and adequate medical service On the other hand, they must submit to strict control by the profession of dishonest or delinquent members or they must submit to lay control for the punishment of such members Physicians in any given state may demand that certain fundamental principles regarding medical service shall be incorporated in the law itself This has the advantage of being more difficult to change than regulations, and for certain broad general principles it may well seem to be advisable

Following the example of the profession in England, the physicians will, without doubt, in this country demand that they have adequate representation on the various controlling bodies administering the law This will probably be true for the representation on the insurance commission itself and then on down through the various arbitration and executive committees to their own committees composed only of panel physicians or physicians actually doing the insurance work among the workingmen After the adequate representation specified in the law, it would seem wisest to leave further regulation of the medical work to be done under the Health Insurance Act, not to the hard and fast designation of the law itself, which must be changed only through legislative action, but to the medical regulations under the Commission, which would, therefore, be more flexible and could be changed easily by executive act Thus the law could be made to run more smoothly because more easily changed, if it were found at any time to be bearing unjustly in the carrying out of its medical functions It would seem wise to leave these regulations to a body composed in part of the representatives of carriers and of workmen of each district and representatives of the physicians elected by doctors working in the insurance district under the chairmanship of a member of the State Controlling Commission or a judge Thus all interests—the employers, the employees, the state, and the physicians—would be represented in the discussion and formulation of these regulations and the desired working equilibrium of exact justice to all interests would be obtained

It has been found necessary in all countries abroad to have committees of physicians who do the insurance work, who meet regularly and who have the power of scrutiny over the economy or extravagance in the ordering of drugs, and who have some degree of power for the discipline of physicians in minor matters and who hear and decide disputes among the physicians themselves Complaints between the physicians and the societies, or between the physicians and the carriers, or between physicians and workingmen go to other committees composed both of the workingmen and the physicians In England, particularly, there are committees representing all the physicians, whether on a panel or not, in a given neighborhood There are also, as has been pointed out, other committees to which disputes go on appeal These committees are either regularly instituted, as in Germany, and are permanent, or they may be formed as inquiry committees for the time being, as in England, to consider certain definite disputes or definite questions in dispute laid before them for referee decision under the Commission The German method of appointment of committees is the simpler and more direct, that of the English law being much more complicated and demanding more detail in its regulations

In both countries there are the registered chemists or pharmacists, and in neither country are the physicians allowed to dispense medicines except in England, in sparsely settled districts under certain definite rules Again are disputes between pharmacists and the physicians regulated by committees, and regulations permitting appeals up to the Commission are formulated All this intricate mechanism is necessary to bring about the smooth running of an intricate law

One of the questions most persistently fought for by the profession in Germany, and one point which was won by the profession in England, is that of free choice of the physician by the patient This, of course, must be within the limitations of consent by the physician to have the patient, and with the physician chosen especially within a reasonable distance of the patient, that he may give good service Against this free choice one party in Germany, as represented by the Dresden Society, has insisted on having any given area divided into districts and a salaried physician placed in each district All insured persons are expected to consult the doctor in their district, but in case of dissatisfaction their wishes are consulted as far as possible All appointed doctors are free to engage and do engage in private practice

Still another method sometimes advocated is that practically of a state medical service, with salaried physicians, in which all persons in a certain district are given the medical attention of certain specified physicians, or, of course, there may be free choice of physicians among a certain limited number of district doctors This state service has best been exemplified in late years in the medical service rendered in the Panama Canal Zone It was here shown how brilliantly and successfully such a generalized system of state medicine could be carried out in certain areas

Left to the profession to decide, it is probable that free choice of physician, without limitation, will be chosen in the majority of instances There is no question that the human relation between physicians and patient will be demanded and should be granted, even under health insurance laws or under state medicine where possible This is particularly advisable where the care of families is in question, for justice demands that whatever may occur to the children of a family it should be the privilege of the parents to feel that they have had the physician of their choice and that no matter how unfortunate the outcome of any sickness may be they have done all that was possible for them to do and have blocked up all loopholes for regrets

Even with the free choice of physicians there must be regulated the limit of the panel or the limit of the number that any one physician may enroll to whom he is willing to render service It is a curious feature in the working of the English law that two years after the act had been in operation the Fabian Committee reported that one fifth of the physicians were caring for one half the patients and four fifths of the physicians for the other half of the patients Thus there was the evidence of overcrowded panels and hurried and inadequate service, which is, as has already been said, the curse of the capitation system of payments and of lodge practice There must, therefore, be the limitation of the number of patients or families that a physician can care for Considering that in all probability each patient will be sick ten days in a year, one can calculate the probable number of patients that could be visited daily For instance, if a thousand patients, or 500 families, with three to a family, that is, 1,500 patients, were permitted to each physician, he would have from 10,000 to 15,000 sick days a year to care for That would be from twenty-eight to forty-two patients a day of minor and major ailments This will be recognized as being all that can be conscientiously well cared for It might be claimed that with one or two assistants a man might well care for more patients but the question of assistants brings up the question of the lack of personal care that the physician gives, or does not give, to the patients he has contracted to serve, and probably it would be wiser that no assistants who are not on the panels should be allowed Two or more panel physicians entering into partnership, and who were willing to pool their panels and render services of mutual aid to each other, would certainly not be objectionable

REMUNERATION OF PHYSICIANS

In considering the remuneration of physicians under health insurance it is necessary to consider certain medical customs and habits of thought The medical service is always an individual one, and the state requires it to be individual Medical public opinion demands that the physician shall give an adequate and just service to his patient, and that the physician shall not permit himself to be placed in positions where he gives careless, incompetent service, to the injury of those under his care Any physician neglecting this standard loses caste He is condemned by his colleagues, and the position or system in which such service is likely to occur is held in contempt by the profession, and has been classified under the opprobrious name of "contract practice" All medical service is really a contract, and many physicians under salaries, such as with insurance companies or railroads, are not condemned, nor do they lose caste, by accepting such contracts. But any contract which carries with it an unreasonable amount of work by the doctor, which in turn forces neglectful, hurried service to the patients, is always condemned. These situations are usually found in certain lumbering and mining camps and under other corporations, and in the familiar lodge practice in large cities.

Lodge practice and other condemned forms of contract practice are all under the capitation plan of remuneration, and the capitation idea of service under sickness insurance has necessarily these inherent faults, which cannot be eradicated and can be controlled only to a limited extent if they can be controlled at all. By this form of capitation is meant the per patient per year form of payment to the doctor. Another form of capitation which is used abroad is frequently used in a compromise with the free choice system of the doctor by the patient, that is, a sickness society has a certain amount of funds that it can pay for medical services to the doctors. This lump sum it gives to some association of doctors, and the physicians charge up each visit and each act of service rendered to each patient as so many points of work done against the medical society. Usually every three months each physician hands in his account to the medical society, and the total number of points are divided into the total amount of funds, and the remuneration paid to the physicians pro rata. The two faults in this country for this method are, that there is no society or association of physicians which is sufficiently universal in its membership to justify such a procedure, for many men who would work among the working classes do not belong to the medical societies and if any control was attempted through the present societies, there would be many doctors working among the insured who would be beyond such control, and, furthermore, in times of great amount of sickness, the more work done the less is each point of service worth, and after a certain amount of service has been given by the physicians, the more work they do, the less money do they receive in ratio to work done. If the total amount paid by the societies remained the same, and if twice as much work were done by the doctors in an epidemic as in an average year, each point would be worth half as much and the remuneration would be the same under great stress of work as under an average year. This is not just remuneration, and would soon bring a resentment on the part of physicians because of undervaluation of their work and the injustice in it, and there soon would develop a situation similar to the other form of capitation of overcrowded work and the underpaid men.

There is, in some parts of Germany, the regularly paid physician under definite salary from the society. This might or might not work out well because it would be a similar form of contract to that of the railroad surgeons but it would be very liable in sickness insurance to be abused, and soon the inherent faults as in capitation, would develop. Moreover, any sickness insurance society could hire only a certain number of physicians and unless they arbitrarily refused free choice of physicians to their members and divided them in equal numbers among their salaried physicians the natural difference in personality of the physicians would immediately cause the practice of some to be overcrowded while that of others would be neglected, and again the inherent faults under capitation would develop.

One comes to the other form of medical service—that of visitation that is a stated fee per visit per patient or with a fee graded according to character of services, with free choice of the physician by the insured either with an unlimited number of patients or with a limited number of patients under a panel system by which a definite number of patients can be apportioned to any one doctor and under which all patients must be apportioned to some doctor—this with the consent of the physicians and patients or, absolute free choice of the physician by the patient, with no panel and no control by the commission of the physician through his position on the panel, or free choice of the physician by the patient, with control of the physicians through a series of committees.

It has been generally claimed that free choice of physicians and this visitation method of so much per patient per visit always increases the number of visits and the expense of medical care to the insuring societies. These claims, however, were not substantiated in an investigation of the subject in Manchester, England. There is no question that from the medical point of view the visitation system is the most just. There is no question from the patient's point of view that they obtain by this means the best service. There is less danger of neglectful and overcrowded services being rendered to them, it eliminates the inherent faults of the capitation system but increases the expense over capitation because it gives a fair return, which capitation does not do. It seems to increase the opportunity for malingering and simulation, which, unless controlled, become the bane and ruin of any social insurance system.

The ethics of any profession are but the moral customs of the general community modified to suit the peculiar services which that given profession performs, and the ethics of the average member of any profession will not rise any higher than the average of the community in which he lives. In any community, therefore, there will be dishonest physicians, whose acts must be controlled that they may render an honest return to the patients and to the insurance carriers. Therefore, this human factor necessitates a scheme by which this control can be most economically and efficiently exerted.

WHO SHALL DECIDE WHEN A PATIENT HAS RECOVERED

In all sickness insurance, there is one mooted question that constantly arises, and that is, who shall decide any dispute between a physician and an insured member as to whether or not this patient should go back to work and his benefits cease? There is always trouble if this work is left to the panel physician alone. Patients will demand leniency, will go to the doctors who are lenient, and physicians, unless of rugged character, will be afraid of losing their patients and injuring their income unless they are lenient, and thus the expense of the insurance carriers will be enormously increased by a continuance on the sick list of patients who should be at work. If, whenever this mooted point arises, the decision could be referred to some impersonal committee or to some regularly constituted salaried medical referee, it would enormously improve the working of the insurance act. There will probably be required a medical inspection department under a medical referee or referees to control malingering and valetudinarianism.

In considering this matter of dispute between the insured and the physician as to whether or not the patient is fit to work, some figures in the experience of the Leipzig and Koningsberg societies are of interest. In the Leipzig society, in 1910 there were 8,497 requests made that the confidential medical advisers of the society should ascertain whether or not the patients genuinely were unable to work. Of these 3 382 were made by the treating physicians and 5,115 by officers of the society. Those who did not come up for examination but went to work of their own choice, numbered 2,670. Of the 5,827 examinations made, 47 per cent. of the patients were declared able to work forthwith, 12 per cent. were declared able to work at the end of the week, 10 per cent. were put off to be reexamined at the end of one or two weeks, and 31 per cent were declared unable to work.[17] In theKöningsberg society in 1909-1910 there were 4,937 who were examined by the confidential medical adviser. Of these, 2 527 were examined at the request of the society, 344 at the request of the attending physician and fifty-seven at the request of the patients who considered that they had been wrongly certified as able to work. Of these, 33 per cent were certified as able to work forthwith, 21 per cent. as able to work in from three to eight days, 23 per cent. as unable to work, and 18 per cent went to work immediately and did not come up for examination.

The testimony concerning the medical referees taken before the Departmental Committee on Sickness Benefit Claims in England strongly favored referees paid by the central commission, not by the approved societies or the insurance committees under the commission. That is, referees were desired who represented the central body. There was a division of opinion whether these should be full-time referees or half-time referees. It has been said, and probably not unjustly, that if half-time referees were employed there would be a greater number of referees and probably a better class of physicians could be obtained than if full-time referees were employed

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[17] Gibbon Medical Benefits in Germany and Denmark.

It was further brought out that it would perhaps be possible to have members of the panel committee act as referees to decide cases that were not in their districts and among patients who could not possibly become their patients, so that in any given group of panel physicians there would be an interchange of the work of refereeing This would have the advantage that the work would be done by men who would best appreciate all the necessary points of view which the special work demanded On the other hand, this method of reciprocal refereeing would have the disadvantage that it would lack the element of medical inspection on the part of the commission, which referees working under and paid by the commission would possess At first glance the addition of the expense of the medical referees to any insurance scheme would seem to add greatly to the expense of the medical administration, but the existence of the referees would save in sick benefits more than enough to pay for their salaries, besides, the salaries of the referees should not be charged to medical expense They should be looked on from the administration point of view and charged to administration expenses, for they are necessary for efficiency and effectiveness in the administration of the law and are representatives of the executive department and should be so considered

THE SPECIALIST IN HEALTH INSURANCE PRACTICE

From the patient's point of view, efficient medical service is necessary Any general sickness insurance law among the poor will develop an increase of medical service and demands Some form of sickness or injury has been the calamity through which the poverty of the poor has been changed to destitution in the majority of those applying to charity for aid, so that often all that has separated poverty from destitution has been the ability of the wage earner to go to work each day Just so soon as the wage earners realize that they can have medical care as their due, without further expense than already borne by them, it is bound to increase enormously the demands on the medical profession Of course, after a few years, when they become used to the idea, the mass of trivial and unnecessary calls will diminish, but a certain amount of unsuspected sickness among the poor will come to light and will probably increase the necessities of medical care beyond any calculated expectations Adequate medical services to the patient must contain, at times, the possibilities of more than the average practitioner can necessarily furnish The standard demanded from the individual practitioner will probably not exceed that demanded under the English act, which considers that adequate medical attention and treatment is that treatment of a kind which can consistently, with the best interests of the patient, be properly undertaken by a general practitioner of ordinary professional competence and skill The physicians of the Book Printers' Sickness Fund, of Berlin, agree to care for all members not requiring hospital treatment, and to expedite recovery to the best of their power In the Leipzig Sickness Fund, physicians agree to give requisite treatment in accordance with the recognized custom of the medical profession The English act does no more than provide the advice of the panel doctor as to how further treatment may be obtained It fails noticeably to furnish expert care or advice or adequate hospital accommodations, it only attempts to provide this in tuberculosis

In the sickness societies of Germany there are many specialists to whom the patients may go The Leipzig society employed 130 specialists and twenty-four dental surgeons out of its total of 400 doctors, the Dresden society sixty-four out of its total of 226 The ratio of specialists to general practitioners should be at least one to five These necessary details of organization must be left to the arrangement of the local societies There is no doubt, however, but that the details of what is ordinary and what is extra work, such as the difference between day calls and night calls, the difference between office visits and home visits, the detail of the ability of the general practitioner to call in a consultant if he or the patient shall demand it, what shall be the fees under these circumstances, or whether all consultation work shall be done by the medical referees, are all questions coming up for decision

There is no question that modern medical treatment demands more team work among physicians than was formerly done The bacteriologic examinations of sputum, of throat cultures, etc, are done in this country free of charge by the city and state departments of health But Roentgen-ray diagnoses and any other special diagnostic procedures must still come under the specialist category

HOSPITALS AND DISPENSARIES UNDER A HEALTH INSURANCE LAW

This brings us to the question of the dispensaries, and back of the dispensaries, the hospitals Up to this time the dispensaries and the hospitals have been the expression of the amount of free medical care that the city or state governments, or private corporations, were willing to give to the poor A well-conducted and well-organized dispensary offers the most economical and efficient method of giving to the patient the many specialized medical services that the varying nature of their illnesses may require More diversified medical and surgical work is performed in the dispensary than is performed in the hospitals There is less specialized service in the majority of the hospitals than in any dispensary of even moderate size But there are more hospitals given over to special work than there are dispensaries so constituted, although most special hospitals have also a dispensary attached to them for the sake of obtaining patients to fill the hospitals Most of the medical positions in dispensary or hospital are occupied without remuneration, the medical experience being sufficient compensation in this country for whatever time or knowledge the doctor may bestow Abroad, in certain countries, similar positions have a salary attached to them, and medical men are not expected to give their medical or surgical knowledge and services uncompensated

Under the sickness insurance law, the general dispensaries present opportunities for an adequate and well-developed method of furnishing abundant services in special branches of medical or surgical care to all patients who are not too sick for hospital care and who may require some special service which the average general practitioner cannot give them The situation, however, will arise whether or not the dispensaries should be confined to the use of the development of the specialties and all the general medical care given in the homes of the patients, or whether patients shall be allowed to choose between their own doctor and some general practitioner in the dispensary as far as the general medical care is concerned This is a question which contains serious possibility of dispute It may be that the general medical classes of a dispensary may, in the end, be developed into a place where patients may go for expert diagnosis on the plane of the consultant, being referred back to their physician for care or being referred to specialists, if such be necessary, the dispensary becoming then an institution for special care or expert diagnosis and not containing, as now, classes in ordinary internal medicine However this may be decided, medical services rendered in the dispensary must, in future, receive remuneration, and free dispensaries soon be a thing of the past Physicians in the dispensaries, moreover, must be under control of the committees controlling the doctors in general insurance practice, and if the dispensaries are run by private corporations, it must be within the power of the Commission to forbid persons under the insurance act to go to dispensaries which do not give adequate medical service In all probability, if the Commission should publish to the insured that a certain dispensary was failing to give adequate medical care, the stigma of such publication would soon force any private corporation to give adequate medical services The rules and regulations by which patients are permitted to accept the hospital provision of the sickness insurance act will have to be under definite agreement and the care received in the hospitals under definite supervision

Under the workmen's compensation law, disputes arise because in the same ward one patient will be under the compensation law and another not, and any surgeon is liable to be accused by the patient not under the compensation law of neglecting him and favoring the man under the compensation, because of the extra fee given to the surgeon The workmen's compensation law makes certain poor patients pay patients and necessarily leaves others out of this category Sickness insurance laws will probably act in the same way in the medical wards in the same hospitals, and the human element of envy and resentment on the part of the patients will bring many disputes and complaints of the service rendered to them It is doubtful if the attending physicians and surgeons in the large public hospitals should take positions on insurance panels It would seem wiser if they did not They usually have reached a position in their profession where their private practice is not among those persons who will be insured by the sickness insurance act It would seem wiser, therefore, that it should become a custom that the attending physicans, at least, should care for all alike without remuneration, and that the special work required by the sickness insurance should be done by some assistant and not by the attending physician The attending physician, therefore in charge would give his services to all alike, and there could be no criticism or envy on the part of the patient for care received The decision required by the sickness insurance act as to when the patient was ready to leave the hospital and go to work, of filling out the certificate necessary under the working of the act, the special daily hospital care and attention required, should be done by some assistant against whom the question of unequal attention between patients could not arise. Adequate supervision of smaller hospitals in which there is no house staff must be formulated by the Commission for there is no question, as stated above, that adequate medical and surgical service must be given and must be controlled, whether this service be in the homes of the patients or in the hospitals and dispensaries to which they may go

We have considered here the working and necessities of medical care and control under a compulsory sickness insurance as exemplified chiefly in England and Germany, as these two types of compulsory insurance give the best examples of the results of the various methods employed for the carrying out of compulsory sickness insurance. Many difficulties of administration and many failures in administration have developed in both countries through the employment of the capitation plan of remuneration to the physicians In Germany this has resulted in bitter animosity between the medical profession and the insuring societies, and bitter contests for increased remuneration in which, in the enormous majority of contests, the physicians have won In England it has resulted in inadequate care being given to the majority of the insured under the act In this country it would seem to be useless to attempt to repeat the inherent faults of capitation payment, and medical opinion and customs in this country are already in vigorous antagonism to this form of contract practice It would seem unwise therefore, to start with the bitter antagonism of the medical profession against capitation This would seem to force the necessity in this country of a remuneration based on the visitation system. With this point of view clearly recognized many difficulties experienced abroad will not occur, and in fact, the chief stumbling block to the successful carrying out of the law is removed.

GENERAL COMMENT

This voluminous report has made no pretense of arguing for or against health insurance. It has made no attempt to bring together the advantages or disadvantages to be gained by the community, or its desirability as a measure of health or social necessity The Committee on Social Insurance offers it as a compilation of what has been done abroad and of the present situation in the United States It has brought forward only those points which would seem to be of interest to the medical profession and which will be useful to them in preparing a study of the situation in any given state in this Union where health insurance is likely to be brought up and placed on the statute books

The effective administration of any health insurance law must be done through limitation by trade or geographic area of its application This is clearly seen in the working abroad of the various laws in the different countries The English law is difficult of administration because it violates this fact. Germany and Austria show marked effectiveness because their laws follow this peculiarity Furthermore, the results obtained in working out the details of the law will be greatly influenced by the financial management of it. In Germany the percentage of expense borne by each member—the employer, the employee, and the state—is designated in percentage, the actual amounts necessary being left to experience and management to obtain. In England a definite monetary amount was laid down by law, and with the errors of actuarial calculation, it has been found that these amounts are insufficient to give the desired results to the workers Eighteen cents a week as a premium was insufficient to give a full measure of sick benefits to the workers or just remuneration to the physicians and medical benefits to the sick, let alone the expenses for administration The English law fails to give more than the ordinary medical service and gives but a minimum of surgical apparatus and appliances, with the result that the sick do not receive the care they should, though the physician is justly remunerated, and the lack of proper appliances keeps many sick on the sick benefit funds at the unnecessary expense of the insurance carriers In Germany the generous application of medical benefit and surgical appliances brings back the tremendous saving in time and wages As was pointed out by the Judicial Council last year, the expense of $8 000 to specialists saved over $160,000 in wages and sick benefits

However one may criticize the details, the insurance act has unquestionably improved the condition of the working classes which have come under the law This is a very noticeable feature in England It will be of great interest to note in the future the effect of the great war on these countries and on the laws of social insurance

The Committee on Social Insurance has endeavored to bring forward as much detail as possible regarding the remuneration of physicians under these laws in order that the economic results on the lives of the physicians could be fairly studied

The more these laws of social insurance are studied the more it is evident how essential is the medical profession in their administration It is equally essential that the profession should clearly understand these laws, and the Committee on Social Insurance therefore, offers this study of health insurance for the assistance of the profession in obtaining this necessary information

Respectfully submitted

ALEXANDER LAMBERT, Chairman

COMMITTEE ON WOMEN'S AND CHILDREN'S WELFARE

To the Council on Health and Public Instruction

Three years ago at the beginning of my chairmanship of the Committee on Women's and Children's Welfare, we adopted the policy of developing one line of action At that time the baby health movement was of the most immediate interest, and offered, as it seemed to us the greatest possibilities among the various phases of public health work then under consideration, we therefore centered our work on it

By the end of the first year our official score card was in the hands of the public, together with Pamphlets 4, 5 and 7 Pamphlets 4 and 5 contain directions for measuring and scoring of babies plans for conducting conferences, and book lists, Pamphlet 7 is devoted to care of the baby At the close of the second year the movement had begun to swing from the contest to the conference ideal, thus establishing a more permanent and scientific basis for our work—that of development of the frail child, rather than recognition of the already healthy one. During the second year the women's clubs throughout the country began to grasp more thoroughly the possibility of the movement, and the Children's Bureau to give its active support But to show how even our committee underestimated further development we quote from a concluding paragraph of the second annual report, p 39

> "With contests giving way to conferences, with the gradual elimination of cash prizes, with the steady increase in number of permanent stations and with increased legislation establishing bureaus and child hygiene departments we feel that the baby health movement is sufficiently developed to be taken care of with ease, and to pass into a minor work of the committee."

With the women's clubs and the federal bureau thoroughly alive to the possibilities of the baby health movement, the last year has been by far the most profitable of my chairmanship In November, 1915 Miss Julia Lathrop issued a bulletin, "Baby Week Campaign," stating the purpose in the introduction, as follows

> "The accompanying bulletin, entitled 'Baby Week Campaigns,' has been prepared for the purpose of presenting in

detail such practicable methods of organizing and carrying on a Baby Week as will be of general application and utility in cities, towns and rural communities throughout the country It has been requested especially by the General Federation of Women's Clubs, which has announced its purpose to promote a nation-wide campaign for the observance of Baby Week '

In the same bulletin Miss Lathrop gives the place our work held in the week's campaign

"The following suggestions for the organization, equipment and arrangement of a baby health conference of any type held during Baby Week are adopted from methods used in many successful conferences The pamphlet of the American Medical Association on Baby Health Conferences has been of great assistance in drawing up this outline Different communities may develop modifications of detail in accordance with local conditions The Children's Bureau will be glad to receive reports of any important modifications which prove successful"

The bulletin later describes the three acceptable types of conferences, namely, "baby health conference without score card, baby health conference with score card, and baby-improvement contests"

The baby health conference without score cards is the ideal conference, and the one the federal bureau carries out

"The record sheet used in these conferences gives space for notes on the age, height, weight, previous history, and any physical defects found in a thorough physical examination It has a page on which the examining physician gives advice to the mother on the general hygiene necessary to better the physical condition of the baby or to keep the baby well In a conference of this type no attempt is made to compare the development or condition of different babies, the object of the conference is rather to center the attention of the mother on the qualities and needs of her own child, to teach in a practical way the facts with regard to the care of babies and to point out the sources of assistance in making or keeping the baby well These purposes should be made plain in the publicity material given out"

In a baby health conference with score card "the physical condition of the baby examined is recorded on a score card For each defect found a certain amount is deducted from the perfect score of 100 When the examination is finished and the score computed, the latter expresses the general physical condition and development of the child Many successful conferences have been held throughout the country during the past few years according to this method The American Medical Association has prepared a standard score card which may be obtained for use at baby health conferences This organization has also prepared a pamphlet giving instructions for organizations wishing to conduct a baby health conference according to this score card, suggestions on the use of the score card to physicians making the examinations, and suggestions upon the computation of the score"

The baby-improvement contest is another form of baby health conference "in which the babies are first examined and scored as in the above conference, and after an interval (one to twelve months) are again examined and scored, and a diploma, medal or prize is given to the babies showing the greatest improvement in score The following resolutions were adopted by the council on health and public instruction of the American Medical Association, Feb 24, 1914

> "That if the awarding of any medals or prizes seems judicious in the baby health conferences, they shall be given to the babies showing the greatest improvement in health between the various examinations rather than to the naturally healthy child who scores high at the first examination"

In compliance with these suggestions, our committee has realized the possibility of making our work in the movement yield nation-wide results The American Medical Association has supplied score cards, anthropometric tables and Pamphlets 5 and 7 wherever desired throughout the United States, besides having the privilege of answering questions or giving advice wherever and whenever requested The culmination of the preparation for the different baby week campaigns throughout the country has given us the keenest gratification of our three years' service on the committee, because it has made it possible for us to serve in a practical, concrete way the organizations, the women's clubs and the Children's Bureau, which we feel it is our especial function to serve

From the beginning of this movement, state and county fair associations have been among our strongest cooperative influences Through their support we have been able to work out many of our theories into practical results The last year one state fair issued a baby book containing the American Medical Score Card, anthropometric table, list of books on babies, and a complete classification of the babies entering the conference Ten thousand copies of these baby books were given out as programs to the audiences

For portions of the country where it is still considered necessary to hold contests, we desire to emphasize the value of the improvement class, in which the subnormal child is given a chance to show development

Following the examinations at one state fair conference, a questionnaire was sent out to the parents, and a large number of answers received The questions, together with a few significant replies, follows

1 What benefit did you expect to derive by entering your baby at the conference?

1 To find his weak and strong points both physically and mentally and find a means of developing him along most needed lines
2 We wanted to know her defects and learn the way to remedy them, also how she would score compared with others her age, in short, how nearly perfect she was
3 To learn his condition mentally and physically
4 We had the satisfaction of knowing whether the babies were being properly taken care of or not, and how they compared with others
5 I wish for professional opinion concerning baby's health weight, measurements, etc, also to compare him with other healthy babies of his age.

2 Did the benefit meet with your expectations?

Out of fifty-three answers, forty-two were positively "yes" five "No," and six "not entirely"

3 What phase of the examination appealed to you as the most satisfactory, and why?

1 Every phase of the examination appealed to me as being extremely important
2 How to feed my baby properly
3 The advice and kindly talk the last doctor gave me.
4 The psychologic examination, because I wanted to know if my child's mind was properly developed
5 The punctuality of appointment for examining The thoroughness of examination The interest shown the children and parents

4 What phase the least satisfactory, and why?

1 Points being taken off and no explanation
2 The child that will "show off" is the one who scores high, while a shy child falls short regardless of how much he knows
3 Examination of the throat
4 The mental development, because children under 3 years of age vary so greatly
5 The mental, because a baby will do things at home that he will not do for strangers

5 If your child is of correct age will you enter him in the improvement class next year? Why?

1 Yes, I want to know how much they have improved
2 Yes, because I am trying to bring him up to standard
3 Yes, to find out the defects as well as improvements.
4 My boy is over age and being physically perfect, except for a birth mark, there is no chance for improvement

6 Aside from your own experience what is your opinion concerning the value of measuring and scoring babies?

1 It is one of the best and most helpful movements that has been undertaken in recent years
2 It will make the parents more careful of their condition before a child is born as well as after he is born
3 Parents take more interest in their children and try to develop them to exact measurements
4 It is a good movement in the right direction, as it induces thoroughness that might otherwise be overlooked
5 It will help mothers to raise a better generation of children

7 Has the measuring and scoring of your baby had, so far, any practical value for you in its care? If so, what?

1 Yes, in the care of her teeth, also teaching self control
2 Yes, that one should devote all thought and time possible to the child, training him both mentally and physically
3 Yes, in his diet and more regular feeding
4 Suggestions of the examining doctors have been carried out successfully
5 Yes, it has given us a keener insight of her physical training
6 Yes, the pointing out to us the danger of doing nothing for flat feet and weak ankles We didn't realize the necessity for orthopedic treatment

The second edition of Pamphlet 5 having been exhausted during the last year, we seized the opportunity to revise the pamphlet and make it more completely meet the requirements of the baby movement as now developed The revised copy is now in the hands of the public.

In the second year of my chairmanship we issued an anthropometric table compiled by Mr F S Crum During the third year we have secured 10,000 score cards and have published a new anthropometric table compiled by Mr Crum which is now available We are at present endeavoring to secure from different sections of the country several thousand score cards on which we wish to base still another table It is also our intention to tabulate all remediable defects from these cards If the results are significant, we shall print them and turn them over to the Children's Bureau and to the proper authorities of the states from which they come We have already received 1,000 cards from one state, and the promise of 1,000 each from several other states Seven states are planning to issue bulletins in which will be tabulated all facts of statistical value connected with this investigation of remediable defects May we here urge that other states furnish us with the names of physicians who will be responsible for collecting and sending to us duplicates of score cards secured from contests or conferences in their locality?

During the past year all *orders* for contests and conferences have been filled by Dr Frederick R Green, Secretary of the Council on Health and Public Instruction, from the Chicago office From our own office we have sent *sample* material *only* The following represents the list of sample copies issued score cards, 2 557, duplicates, 3,550, anthropometric tables, 504, Pamphlet 5, 555, Pamphlet 7 608 Practically each of the foregoing samples was accompanied by a letter from our committee

The Central Committee, which have given us valuable and steady assistance for this year is composed of Rosa L. Gantt, Spartanburg, S C , Samuel Jay Crumbine, Topeka, Kan , M Nelson Voldeng Woodward, Iowa, Grace L Meigs, Washington, D C , Phoebe Van Voast, New York, Margaret V Clark, Long Beach, Calif , and Frances Sage Bradley, Atlanta, Ga

The members of the Score Card Committee are Henry L K. Shaw, Albany, N Y , Velura E Powell Red Oak, Iowa, Josephine Baker, New York, Howard Childs Carpenter, Philadelphia, and Lenna L Meanes, ex-officio, Des Moines, Iowa This committee is constantly at work revising and perfecting the score card Dr Henry L K. Shaw as chairman of this committee has done much toward establishing the scientific value of this card, and in inspiring confidence in that value

In conclusion we wish to acknowledge with hearty appreciation the support given us by our Council, the splendid recognition by the Children's Bureau, and the universal cooperation of the women's clubs

Respectfully submitted

Lenna L. Meanes, Chairman,
Sophie Hinze Scott, Secretary

Committee on Cancer

To the Council on Health and Public Instruction

Your committee as a committee has done very little during the past year, but each individual has done his share in disseminating knowledge as to what can be accomplished when cancer is recognized early Dr Bloodgood has been particularly active, and in addition to numerous lectures in the East he has made an extensive tour of the Pacific Coast giving cancer talks to large lay and medical audiences

Last year your committee reported the publication of several pamphlets some dealing with the general subject of cancer others with cancer of individual organs During the last year we have published Dr Bloodgood s article on "What Every Woman Should Know About the Breast,' and the printer has in hand Dr Julius Friedenwald's article on Cancer of the Stomach' We have the manuscripts of several other important papers on cancer These will be published as the demand increases for more literature on the subject

Several years ago it was pointed out by Dr Frederick R. Green and others that there was a great multiplicity of committees and organizations scattered throughout the United States, and that while each was doing its best for the public welfare, there was much overlapping in their labors—much useless labor, in fact—as a result of the lack of coordination It was pointed out that with concerted action a great deal more could be accomplished with less labor

When your committee was appointed, the committee of the Congress of the Surgeons of America had been in existence for several years, and the American Society for the Control of Cancer had recently been organized After mature deliberation it was deemed best to let the American Society for the Control of Cancer take the more active part, as it in a large measure came into being through the efforts of the laity and they have contributed mainly to its support This society during the year has been establishing state and local committees, and will soon have the country well supplied with local centers from which cancer knowledge will be distributed It has been the desire on our part to avoid duplication of the work, and this accounts for our apparent inactivity

The knowledge of the laity concerning cancer is being disseminated more and more each day Your committee is doing excellent work in an advisary capacity and stands ready at any time to supplement the endeavors of the American Society for the Control of Cancer when it may be necessary The Council of the American Medical Association has rendered signal service in the publication and dissemination of the various pamphlets on cancer Just as soon as state and county organizations are fully completed and in action the cancer reprints will have an ever increasing sphere of usefulness The outlook in cancer is becoming more and more hopeful

Respectfully submitted

Thomas S Cullen, Chairman,
Howard C Taylor,
C Jeff Miller,
Frank F Simpson,
Joseph C Bloodgood

Committee on Conservation of Vision

To the Council on Health and Public Instruction

During the past year, I have kept the *Press Bulletin* supplied with popular eye articles for newspaper use and can only regret that the *Bulletin* is not distributed every week as before, as I believe it is a source of supplying the public with plain health literature, which is much needed

Our committee and our state managers have had much to do with the enactment of eye legislation in several states It has also had much to do with the prosecution of a number of individuals (physicians, midwives and others) who have disobeyed the state laws concerning the welfare of eyesight

Our committee is endeavoring to teach the cheapness of health, but it is difficult to impress the public with this unanswerable truth It is cheaper to keep people well than to allow them to be sick It costs five times as much to educate a blind child as it does to educate a seeing child Sixty-five per cent of schoolchildren have some eye, ear, nose or throat defect that hinders education Unprogressive schoolchildren are called "repeaters," that is, they keep repeating their studies It costs $100,000,000 a year to educate 3,000,000 repeating American children This is mostly unnecessary, as only about 3 per cent. are really mentally defective If their physical defects are relieved, all but 3 per cent. will become average scholars This would be a great boon to themselves, their parents, their teachers and their community Over half of the criminals are poorly educated, and apparently mentally defective It is probable that if their physical defects had been corrected in early childhood so that the easy acquirement of an education had been possible, most of them would never have become criminals at all, they would have been happier, and enormous sums of money would have been deflected into worthier channels In such a reform, the eyes play an important part, for 87 per cent of our knowledge comes to us through our eyes, hence the supreme importance of good eyes for schoolchildren

Preventive eye work is very cheap but its results are big To drop silver nitrate into all new babies' eyes cost 2 cents per baby, but think of the misery and money it saves! It would remove 25 per cent. of the inmates of our blind asylums There are now 300 000 dependent blind in America costing $15,000,000 a year to support. The wearing of goggles in shops, and the use of protectives for dangerous machinery would cost but little, and would almost entirely prevent injury to eyes in shops Control over the manufacture and sale of wood alcohol, in its various seductive forms, would save many eyes and many lives, and would cost practically nothing Five hundred dollars a year, and the cooperation of teachers of a city the size of Chicago, would enormously improve the eye, ear, nose and throat conditions of the schoolchildren of that city, and would make teaching much easier, and much less expensive The teachers can make health surveys easily and efficiently if they will Plain instructions are printed, and there is no excuse for not doing it No medical education is necessary, and the little time devoted to the work would be amply repaid by the added ease and comfort of the teachers' work, as stupid children are made bright by treatment, operations, glasses, etc

No	State	Manager	Number of Lectures	Number of Lecturers	Number of Cities	Size of Aud'ences
1	Illinois	P Gulliford	9	5	9	3,300
2	Wisconsin	N M Black	6	4	4	800
3	Missouri	C Loeb	7	6	3	1 000[1]
4	New Hampshire	C H Babbitt	3	3	3	300[2]
5	Tennessee	F O Ellett	4	3	3	900[3]
6	Georgia	R P Cox	55	12	50	7,500[4]
7	Massachusetts	W B Lancaster	1	1	1	80
8	Michigan	W R Parker	4	4	4	1,300
9	Dist Columbia	O Wilkinson	2	1	1	100
10	Idaho	R L Nourse	5	1	1	800
11	Nevada	H A Brown	4	1	4	700
12	Ohio	G C Schaeffer	98	11	34	26 420[5]
13	Arkansas	H Moulton	11	5	9	2 000[6]
14	New York	Lewis and Alger	100	25	100	27 000[7]
15	South Dakota	T G Parsons	13	8	10	3,000[8]
16	Maryland	J J Carroll	1	1	1	300
17	New Jersey	O F Adams	9	4	3	2,000
18	Kentucky	J A Stucky	42	2	18	7,000
19	Virginia	J A White	1	1	1	200
20	Oklahoma	T F Davis	3	1	3	1,500
21	Alabama	S L Ledbetter	6	4	5	700[9]
	Total		284	81	267	84,900

It will thus be seen that during the past year lectures have been delivered in 21 states Three hundred and eighty four lectures have been delivered by 81 lecturers, in 267 cities to audiences estimated at 84 900 people In the two previous years of the existence of this committee 829 lectures were delivered to 183,328 people If we add to these figures the work of the past year, it will be seen that 1,213 lectures have been delivered to 268,223 people

[1] A local committee for the prevention of blindness has been formed at St Charles, Mo, under the influence of our National Committee

[2] Through the influence of our National Committee much was said on ocular salvation by lecturers who talked throughout the state, during Baby Week

[3] Through our Committee, the Nashville Board of Education adopted the eye, ear, nose and throat examination of schoolchildren

[4] Through our Committee, many cities have adopted the examination of schoolchildren's eyes, ears, noses and throats

[5] Mostly accomplished by workers of the Ohio Commission for the Blind

[6] Survey of eyes ears, noses and throats of schoolchildren commenced in Pine Bluff

[7] Given largely under the auspices of the New York State Committee for the Prevention of Blindness, the New York Association for the Blind, the National Committee for the Prevention of Blindness, etc

[8] Eye, ear, nose and throat inspection inaugurated in Mitchell, Aberdeen and Watertown Dr Parsons has organized a most successful society called the School Hygiene Association It has a membership of 300

[9] Montgomery and Cloverdale County have begun the annual and systematic examination of schoolchildren's eyes, ears, noses and throats, A law is being introduced in the Alabama legislature for the examination of schoolchildren's eyes, ears, noses and throats

Our committee is endeavoring to inspire the different states with the necessity for state activity along the lines of visual conservation The most efficient manner of doing this is by means of lectures in the different towns and cities These are arranged by the several state managers, whose duty it is to bring competent lecturers and receptive audiences together This is frequently very difficult work, and the state managers deserve much credit for their devoted and unselfish labor Many circumstances have conspired to make this rather a poor season for this work, and yet creditable work has been accomplished I give here an incomplete account of the past season's lectures, and desire to say that the suddenness of the call for this report renders it impossible for me to give a full report of the lecture season

Our committee has this season undertaken a most arduous but useful work, namely, the compilation of all the eye laws of the United States It is astonishing how ignorant almost every one is concerning the laws of their own states For instance, how many people in Idaho or New Jersey or Virginia could tell whether any law existed in their own state concerning trachoma or wood alcohol or schoolchildren's eyes, and still further, how many could tell what that law was, if any existed? It is to obviate just this ignorance that the committee is compiling the various eye laws Even when such laws are on the statute books they are difficult to find When this work is completed it will enable any one to tell at a glance if any law on any eye subject exists in any state, and if so just what is the reading of the law The articles are appearing quarterly in *Ophthalmology*, and when completed, will be published by The Journal in book form as a work of reference The titles of the articles are as follows

1 State Legislation Concerning Schoolchildrens' Eyes, Ears, Noses and Throats
2 State Legislation Concerning Ophthalmia Neonatorum.
3 State Legislation Concerning Trachoma
4 State Legislation Concerning Wood Alcohol
5 State Legislation Concerning Shop Accidents and Shop Conditions Affecting the Eye
6 State Legislation Concerning Optometry
7 State Legislation Concerning the Blind
8 Model Eye Laws for State Legislation

The first three of these articles have already appeared, and the others will follow in each issue of *Ophthalmology* The work of collecting this material has been very arduous, each article represents about 500 letters sent out from my office.

In closing my report I wish to say that our work would be much increased if the Council could furnish us with even a little more money than is at present allowed We need more stereopticon pictures and more pamphlets for liberal distribution We need short leaflets for wide distribution, in several languages, on "Babies' Sore Eyes," "Shop Accidents," "Factory Conditions Favoring Eye Salvation," "Wood Alcohol," etc The work of this committee should include conservation of hearing as well as the conservation of vision These and other things we need to advance in our work, and unless such steps are taken, our committee will languish and eventually die of starvation I earnestly recommend that these matters be taken into earnest consideration

Respectfully submitted.

Frank Allport, Chairman

Report of Committee on Cooperation With the National Education Association

To the Council on Health and Public Instruction

For four years the American Medical Association and the National Education Association have made special appropriations for the purpose of studying the hygienic and sanitary conditions of schools

It was early ascertained that the country school was sanitarily and hygienically behind the city school, and that the city school was steadily improving while the country school was at a standstill This has been stated in former reports of the committees Last year, 750,000 copies of the report were printed by the American Medical Association press, the expenses were paid by the Elizabeth McCormick Memorial Fund, and the reports were circulated by the U S Bureau of Education

This year's report of the committee, compiled by Thomas D Wood, M D, chairman of the National Education Committee, is now ready for the printer It is far more comprehensive and important than any former report It will be seen by the report that the work of the committees has just commenced The methods suggested for improving conditions are simple, scientific and practical, but patient and careful supervision will be indispensable It is sincerely hoped that the work so favorably launched may be continued until satisfactory results have been obtained in the rural schools throughout the land.

At the annual committee meeting in Detroit, the members present authorized for the work of the committee

First, the printing of a small introductory edition of a second report (of twenty-four pages) of our committee on The Health Care of Rural Schoolchildren"

Second, the reproduction of our committee charts in a pamphlet edition, to be distributed as effectively as may be and if possible, through the Bureau of Education

Third, the reproduction in actual size of an edition of 100 copies each of all or some of these charts, to meet the demands which we are receiving in considerable and increasing numbers for these charts The plan is to lend some sets of these charts in answer to requests for them, and to sell the sets or individual charts at cost in response to requests that may be received It seems desirable that the committee should have sets of these charts to lend to state and county fairs and to other exhibitions attended particularly by people from rural regions

Fourth, to undertake (when there may be sufficient funds made available for this purpose) under the auspices and supervision of the committee, a national investigation (in from ten to fifteen states) of the health and welfare of teachers

The principal obstacle in the way of further development of the committee's activities is lack of sufficient funds to finance the printing of a large edition of the second report, the reproduction of the charts for use in public health and educational exhibits, and the expenses of the nation-wide investigation of the health and welfare of teachers with the publication of a third pamphlet containing the results of this investigation This committee for its important work should have at least $5,000 a year for the next three years Unfortunately the resources of neither the American Medical Association nor the National Education Association will permit of such an appropriation It must therefore be found through the assistance and cooperation of other bodies or through the broad spirited philanthropy of some individual citizen

Respectfully submitted

R. W CORWIN, Chairman

Dr Ennion Williams Virginia, asked permission to present a statement bearing on the Report of the Council on Health and Public Instruction just read and have it referred to the Reference Committee on Legislation and Political Action

Dr A. R. Mitchell Nebraska moved that Dr Williams be permitted to present the report by title and that it be referred to the Reference Committee on Legislaion and Political Action

Seconded and carried

Report of the Council on Medical Education

Dr Arthur Dean Bevan Illinois, Chairman, presented the report of the Council on Medical Education, which was referred to the Reference Committee on Medical Education

The report follows

To the Members of the House of Delegates of the American Medical Association

Each year since 1905, the report to this body has shown a continued progress in medical education The large oversupply of medical colleges has given way to a more normal supply of greatly improved institutions The fact that such progress has been possible in a brief twelve years reveals how serious had become, up to that time, the conditions underlying medical education

In the thirty years following the Civil War, the number of medical colleges in the United States was rapidly increased, until in 1904 this country had over half of the world s supply Only a few of these institutions were well conducted, the majority were owned by individuals or joint stock corporations and conducted for profit In order to increase the profits, all methods were resorted to in the effort to attract students The enrolment in the medical colleges of the United States in 1904, therefore, was much larger than normal conditions would have brought

During the same thirty-year period, however, forces were being developed which would eventually demand an entirely different type of medical teaching institution It was during this period that medicine was placed on a scientific basis through the developments in pathology, bacteriology, physiology, physiologic chemistry and pharmacology These developments have revolutionized the study of medicine, they have made necessary a thorough preparation in the fundamental sciences and a longer and better correlated medical course As a result, the practice of medicine hereafter will be by men more thoroughly trained in the medical sciences

When the practice of medicine throughout the country is entirely on this scientific basis, the public will soon become familiar with the possibilities of modern medicine, and this, in turn, will eliminate once for all the dogmas and cults which have been and are doing so much harm This is the problem of the organized medical profession, and the American Medical Association is attacking it through the Council on Pharmacy and Chemistry, the Council on Medical Education and the Council on Health and Public Instruction The medical profession must clean its own house and get rid by education and propaganda of the ignorant, poorly qualified men in its own ranks as the first step toward placing the practice of medicine on a thoroughly sound, scientific basis It is pleasing to report that great progress is being made

THE CAMPAIGN FOR IMPROVEMENT

In 1905, conditions were ripe for the campaign which the Council on Medical Education has since been conducting, with the results of which you are already familiar The results after eleven years of this campaign are shown in Table 1 Although the oversupply of medical schools has been reduced by about 40 per cent, the number of higher standard colleges has been increased by over 80 per cent The figures in regard to medical students and graduates show an improvement in quality as compared with quantity in about the same proportions

TABLE 1—QUALITY VERSUS QUANTITY

THIS TABLE SHOWS THAT ALTHOUGH THE TOTALS OF COLLEGES STUDENTS AND GRADUATES HAVE BEEN DECREASED IN ELEVEN YEARS THE NUMBERS OF HIGH STANDARD COLLEGES BETTER EDUCATED STUDENTS AND BETTER TRAINED GRADUATES HAVE BEEN INCREASED

Medical Colleges	1904	1915
Totals of medical colleges	162	95
Totals having higher entrance standards	4	83
Percentages having higher requirements	2 5	87 4
Medical Students		
Totals in all colleges	28 142	14 891
Totals in high standard colleges	1 761	11,912
Percentages in high standard colleges	6 3	80 0
Medical Graduates		
Totals from all colleges	5 747	3 536
Totals from high standard colleges	369	2 652
Percentages from high standard colleges	6 4	75 0

Notable improvements have been brought about through the Medical Students' Register, which was established in accordance with the action taken by the House of Delegates in 1910 Through the facts shown by this register and the information obtained by inspections, the conditions in all medical schools, regarding the administration of entrance requirements, methods of teaching, facilities, etc., are now well known Practically all that was known prior to the organization of the Council was that standards were seriously low and that conditions were generally bad

Although the number of medical colleges has been greatly reduced, there is still no dearth in the supply of colleges Statistics show that fifty or sixty medical colleges could easily have cared for all students enrolled in the ninety-five which held sessions last year, without the expenditure of another dollar for teachers or equipment

The number of medical colleges will doubtless be further reduced, but statistics show that the lowest ebb in the attendance of medical students has perhaps already been reached Reports received from the ninety-five medical colleges now holding sessions show an increase over last year in the enrolment of freshman students This is especially true in the colleges which put the higher admission requirement into effect two or more years ago It is quite evident, therefore, that after a few years have been allowed for readjustment under the higher entrance standards, the enrolments of students will become normal

The "Ideal" and the American Standard

During the last twelve years the Council has endeavored to secure the general adoption of the standard referred to as the "ideal" standard, in our report to the House of Delegates in 1904 That standard was as follows

(*a*) A four-year high school course,
(*b*) A year devoted to college courses in physics, chemistry and biology,
(*c*) A four-year medical course, and
(*d*) A year as an intern in a hospital

The general adoption of this standard has been secured, so far as the year of physics, chemistry and biology and a four-year medical course are concerned It has been adopted by eighty-five of the ninety-five medical schools in this country As to the hospital intern year, a large majority of the medical school graduates voluntarily secure such work before beginning independent practice

The American Standard of Medical Education

As a result of the influence of colleges and universities, the ideal standard urged by the Council has been somewhat modified Educators generally advocated two years of premedical college preparation instead of one, and the medical schools gradually accepted that standard, so that at present fifty-four of the ninety-five medical colleges now require for admission two years of college work It is evident also that the twenty schools which will survive out of the remaining forty will likewise adopt this requirement, and that standard of preliminary education has been adopted by fifteen state licensing boards It is evident, therefore, that the American standard of medical education that is today most widely accepted and which in the near future will be legally required in every state of the Union is as follows

(*a*) After a four-year high school course,
(*b*) Two years of collegiate work, including courses in physics, chemistry, biology and a modern language,
(*c*) A four-year medical course, and
(*d*) A year as an intern in a hospital

It can be confidently predicted that such a standard will be the legal requirement in this country by 1920 The remaining steps that must be taken to bring this about are few and simple The state licensing boards will doubtless eliminate about twenty schools that are still a menace to sound medical education and efficient medical practice This will reduce the number of schools to about seventy, all of which will adopt acceptable requirements The state boards throughout the country should require the completion of a hospital internship before a condidate is admitted to the examination for medical licensure A study of the hospital year problem shows that the best solution is simply to insist on a hospital year as a necessary part of a medical training, and to urge the medical licensing board in each state to make it a legal requirement When these requirements are adopted by all states, American medical education will be on as high a basis as that of any other country in the world

The hospital internship has been developed in such a way that it affords a most valuable training This is in marked contrast with the required hospital year in Germany, where the intern is elbowed out by the permanent assistants and given little work and little training The hospital internship in this country is also more satisfactory than the plan of house physicians and surgeons in England which, as a rule, are appointments of only six months and open to a small proportion of graduates

The inspecting and classifying of the hospitals of the country is an important matter, especially in connection with the value of an internship served in them The Council has this work in hand It has been progressing slowly because we have not had sufficient funds to carry on the work properly The trustees of the American Medical Association have been requested to provide the funds necessary to prosecute the work more rapidly In the meantime the Carnegie Foundation has given the American College of Surgeons $10,000 a year for three years to be devoted to hospital inspection The Council will cooperate in every way possible to make this hospital inspection thorough and fruitful

More Medical College Mergers Needed

The developing of satisfactory medical education in this country has been hindered by the fact that in some of our important centers instead of one strong medical school there are several which have different standards and conflicting interests In most of the centers of medical education in Europe there is in each but one medical school, which receives the undivided support of the people, the profession, and as a rule the government Such a situation has many advantages There are in this country eleven states with no medical schools, twenty-one with but a single medical school and seventeen with two or more schools There are twelve cities having two or more separate schools

It would be desirable, therefore, to have in each medical center either one medical school, as exists in Berlin, Paris or Vienna, or a close affiliation of the existing medical schools Would it not be possible to establish in each medical center a single, strong medical teaching institution with all the advantages that a well organized arrangement brings with it? In the smaller medical centers with a quota of not to exceed from 400 to 500 students and where existing conditions permitted, a medical school with a single teaching unit, with single departments of anatomy, pathology, medicine, etc, would suffice. In large centers with from 1,000 to 2,000 medical students, however, several teaching units would be needed, each with its separate laboratories of anatomy, pathology, etc, and a number of medical and surgical clinics, since in a single laboratory of anatomy, for example, or in a single clinic, 1,000 or more students could not be properly taught Where there are now two or more universities with well established medical departments, a cooperative plan might be devised by which they could work in harmony and the several medical departments be made individual teaching units This would insure uniform requirements and advantages which could be obtained without interference with established university organizations, and much confusion and expense might be saved by a common administration They could with proper conditions exchange credits, municipal hospitals could be better utilized, endowments could be more easily secured, and postgraduate work could be better organized

It should be no more difficult to get several medical schools to cooperate in this way than to get a number of railroads to cooperate in a great union depot plan or to get a number of steel plants to form a steel trust It will require breadth of view, hard work and organizing ability, but the end sought is worth all the hard work necessary to accomplish it, and some such plan is necessary to bring about the best result in American medical education

Improved Standards of Licensure

As shown in Table 2, there are now thirty-two states which have adopted one or two years of college work as a minimum standard of preliminary education for those who seek the license to practice medicine in those states The table shows not only the number of years of premedical college work required by each state, but also the sessions in which students matriculating in medical colleges are affected by the increased requirement and the year in and after which it applies to all graduates A remarkable progress has been made in state board requirements since 1908, prior to which no state was requiring more than a four-year high school education as the minimum standard of preliminary education As will be noted, there are now thirty-three states which have adopted the higher standard, fifteen of which require as a minimum *two years* of premedical college work In three states, Arizona, Maryland and Washington, the medical practice acts specify that the educational requirements for the applicant who seeks the license to practice in those states are to be the same as those held by the Association of American Medical Colleges in the year he graduated The requirements in those states, therefore, are changed automatically with changes adopted by that association, which adopted the standards of one year of college work and two years of college work to take effect for all *matriculants* respectively in 1914 and 1918 The standards apply to all *graduates*, therefore, respectively in 1918 and 1922

The advances in standards of licensure since 1904 are further shown in Table 3 The most marked increase is in regard to the requirement of collegiate work, already referred to The next greatest increase (twenty-nine) is in the number of states—thirty-three—which are now refusing to recognize low standard colleges

Chartering of Educational Institutions

As a result of a special investigation, it is found that only ten states have provided any control over the chartering of educational institutions, and in two of these the restrictions do not apply to irregular professional schools or correspondence colleges In thirty-eight states, therefore, it appears that any coterie of men, by paying an insignificantly small fee, can obtain permission to open an institution with the avowed purpose of granting degrees no questions being asked as to whether the institution is properly equipped or has sufficiently qualified teachers to furnish the education usually demanded before such degrees are granted After they are organized, such institutions are usually responsible to no one, and are free to make use of questionable practices even to the actual barter in degrees and certificates Even after they are exposed, no legal machinery has been provided for revoking their charters or punishing the impostors As a rule the fees charged by such institutions are far in excess of the tuition charged by some of the best teaching institutions in the land

TABLE 2—STATE REQUIREMENTS OF HIGHER PRELIMINARY EDUCATION

There are now thirty two states which have adopted requirements of preliminary education in addition to a standard four year high school education These states the number of college years required and the time the higher requirements became effective are as follows

State Examining Board of	Number of Years Required	Affects Students Matriculating	Affects All Graduates
Requiring Two Years			
Alabama	2	1915-16	1919
Arizona	2	1918-19	1922
Colorado	2	1910-11	1914
Indiana	2	1911 12	1915
Iowa	2	1911 12	1915
Maryland	2	1918-19	1922
Minnesota	2	1908-09	1912
New Hampshire	2	1915-16	1919
New Jersey	2	1917 18	1921
North Dakota	2	1908-09	1912
Oklahoma	2	1917 18	1921
South Dakota	2	1911 12	1915
Virginia	2	1917 18	1921
Washington	2	1918-19	1922
Wisconsin	2	1915-16	1919
Requiring One Year			
Arizona*	1	1914-15	1918
Arkansas	1	1915-16	1919
California	1	1915-16	1919
Connecticut	1	1910-11	1914
Illinois	1	1915-16	1919
Indiana*	1	1910-11	1914
Kansas	1	1910-11	1914
Kentucky	1	1914 15	1918
Louisiana	1	1915-16	1919
Maryland*	1	1914-15	1918
Michigan	1	1914 15	1918
Mississippi	1	1915-16	1919
New Hampshire*	1	1914-15	1918
New Jersey*	1	1916-17	1920
North Carolina	1	1914-15	1918
Oklahoma*	1	1914-15	1918
Pennsylvania	1	1914 15	1918
Rhode Island	1	1914-15	1918
Tennessee.	1	1915-16	1919
Texas	1	1914-15	1918
Utah	1	1913-14	1917
Vermont	1	1913-14	1917
Virginia*	1	1914-15	1918
Washington*	1	1914-15	1918
West Virginia	1	1917 18	1921

* The 2 year requirement also adopted effective later

New Form of Quackery

Through the lack of an adequate check on the chartering or conduct of such institutions a new and popular form of quackery has been established, which provides the easiest present-day method of evading the educational requirements of the medical practice laws 'Colleges' and "schools professing to turn out in a few brief weeks or months, by correspondence methods or otherwise, specialists in some branch related to medicine have been springing up in various states Briefly, the conditions have become so bad as to cause unnecessary but serious demoralization in the field of medical education, in the licensing of physicians and in the practice of the healing art The existence of such unregulated, unstandardized institutions is radically unfair to the ambitious students who have been beguiled into them, it has led to the development of an organized attempt to destroy or evade laws passed in the interest of the public and, worst of all, it is a serious menace to the public, since it is sweeping into the practice of the healing art large numbers of those who are insufficiently trained to assume responsibility for the care of the sick

Largest Number In Illinois

The largest number of these institutions at present is found in Illinois, where conditions are especially favorable Besides the Class C medical schools which continue to exist, there are in Illinois colleges of osteopathy, chiropractic, chiropody, naprapathy, somopathy, physcultopathy, refraction, optics and a legion of others, most of which have for their chief inducement elegantly printed diplomas conferring the degree of "doctor" of this, that or the other The courses offered for such degrees are in some instances so notably a makeshift as to be ridiculous, and an insult to education Some are offering courses under two or more titles, and others appear to be doing a retail business in dispensing degrees in all the 'forms" or 'systems" of healing which may have been or ever shall be enumerated

In Iowa several so-called chiropractic institutions have been chartered, which are reported to be without adequate equipment, and, with low entrance requirements, are turning out, by correspondence courses or other loose methods, relays of followers of that particular "school" Although "made in Iowa," these graduates are not permitted legally to practice in Iowa, but are turned into other states where adequate legal barriers have not been established against them Such institutions are found also in California, Massachusetts, Michigan, Minnesota, Missouri, Oklahoma and Pennsylvania

TABLE 3.—ADVANCES IN STATE LICENSURE REQUIREMENTS IN TWELVE YEARS

Requirement or Provision	States Having Provision for			States Still Having No Provision for
	1904	1916	Increase	
Preliminary Education				
Any requirement	20	45	25	4
A standard four year high school education or higher	10	39	29	10
One or two years of college work as a minimum	0	32	32	17
That all applicants be graduates of a medical college	36	48	12	1
That all applicants undergo an examination for license	45	48	3	1
Requirement of practical tests in the license examinations	1	7	6	42
Full authority by board to refuse recognition to low grade colleges	14	34	20	15
Boards refusing to recognize low grade colleges*	5	34	29	15
Reciprocal relations with other states	27	40	13	9
Single boards of medical examiners	36	42	6	7

* In three states Arkansas Connecticut and Florida each of which has three separate boards only the regular (nonsectarian) boards have refused recognition to low standard medical colleges

In the interests of the public there should be provided in every state some competent board or authority to have in charge not only the chartering of all educational institutions, but also the right to revoke the charter and close the doors of every institution which is not being conducted in an honorable manner and for a proper purpose

The eleven states which thus far have provided any means by which the charter of educational institutions may be guaranteed are Arkansas, Indiana, Maine, Maryland, Massachusetts, Nebraska, New Jersey, New York, North Carolina, Ohio and Pennsylvania

New York at present appears to have the most complete control of educational institutions In Maine, Massachusetts and North Carolina a special act of the legislature is necessary before an educational institution can obtain legal authority to grant degrees In Arkansas, Indiana, Maryland, New York, Ohio and Pennsylvania the charter must be obtained, directly or indirectly, through the state board, or department of education, or through a committee (Pennsylvania) closely connected with that department In Nebraska, application must be made to the judge of the district court, whose duty is to appoint one or more commissioners to investigate and vouch for the claims of the applicant Even in some of these states the authority has apparently been made to cover only so-called academic colleges and universities It is clear that such authority should be extended to include all institutions professing to give instruction in any subject, especially those bearing the name of "school," "academy," "college," "university" or the like, and also all institutions granting degrees of whatever kind The menace from such irresponsible, professedly "educational" institutions is much greater than is generally understood

RELATIONS WITH CANADA

The professional relations between Canada and the United States have always been most cordial For several years the medical schools of Canada have been regularly furnishing reports to the Council on Medical Education for publication with the statistics appearing annually in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION It is with surprise and with regret, therefore, that a discrimination against even the best medical colleges in the United States has been established in two provinces of Canada—Quebec and Ontario Graduates from even the highest grade medical schools in this country in order to secure licenses in the two provinces named are required to have taken an additional year's work in one of the medical schools of those provinces No objection could be raised if only graduates of some of the lower grade medical schools in the United States were thus debarred, but official information obtained makes it clear that no exceptions are made to the rule even for graduates of the medical schools of Johns Hopkins University, Leland Stanford Junior University, Cornell, Columbia, Western Reserve and other universities which require two, three or four years of collegiate work for admission to their medical departments, including not only thorough courses in physics, chemistry and biology but also a "reading knowledge" of French or German, or both, and the completion of other collegiate subjects This Canadian attitude is more arbitrary than that by the Conjoint Board of London, which recognizes the premedical college courses in physics, chemistry and biology if taken in a recognized college, and which admits to its final examinations graduates of twenty or more medical colleges of the United States

In Canada the student, after three years in high school, registers for a five-year course in the medical school, the first year of which is devoted largely to the premedical sciences, physics, chemistry and biology In the United States at present, in fifty medical schools, in addition to a four-year high school course, the student is required to complete *two years* of work in a standard liberal arts college, which work must have included the premedical sciences, physics, chemistry and biology, before he is admitted to the medical school For admission to thirty-five other medical colleges, one year of liberal arts college work beyond the four-year high school course is required, and this college year also must include courses in physics, chemistry and biology All the medical colleges in the United States, therefore, require, so far as time is concerned, *one* more year of high school work than is required in Canada, and fifty of the medical colleges of the United States require *two more* years of high school and college work than are required in Canada The courses in physics, chemistry and biology in both Canada and the United States are taught by university or college professors of those sciences, and not by teachers of medical subjects It is fair to assume, therefore, that the science courses in both countries are taught with equal thoroughness Such advantages as there may be would seem to be with the medical schools in the United States because of the additional training and the greater maturity of the students

DIFFERENT GRADES OF MEDICAL COLLEGES

Along with the inspections of the medical colleges in the United States which have been made by the Council on Medical Education, two complete tours of inspections were made of the medical colleges in Canada, the second having been completed during the college session of 1913-1914 Those inspections revealed the fact that Canada, like the United States, has several grades of medical schools[1] As already stated, not one of the medical schools of Canada requires for admission more than a high school education, represented by the completion of the eleventh grade One or two of the schools in the provinces of Quebec and Ontario require in addition the passing of an examination referred to as the "junior matriculation"

AMERICAN MEDICAL SCHOOLS GREATLY IMPROVED

It will be seen from the foregoing statements that conditions in education in the two countries are quite parallel except that entrance standards are now higher in the United States by one or two years During the remarkable reorganization that has been going on in this country since the beginning of the Council's work, conditions in the United States have been extensively improved There are now in the United States thirty or forty medical schools which will compare favorably with the medical schools of any other country During this development of medical education in the United States, American schools have been careful to avoid the weakness of both English and German systems of medical education and, under able supervision, have established thorough and complete courses of medical education

Considering all these things, therefore, it is hoped that our good friends in the medical profession of Quebec and Ontario will have their license laws so amended as to correct this unfair discrimination against the high grade medical colleges of the United States Evidences of efforts in this direction have already been received which, it is hoped, will be successful

RECIPROCAL RELATIONS WITH OTHER COUNTRIES

This calls attention to the fact that the time has arrived when a more careful discrimination should be used by the licensing boards of this country in the acceptance of credentials from foreign medical schools and in the licensing of graduates from such institutions There is certainly no reason why the states should keep a wide-open door for the heterogeneous stream of graduates from the medical schools of other countries, especially from those which do not show a disposition to return the courtesy Then there is also the question of providing for reciprocal relations with other countries in the recognition of the graduates of high grade medical schools

THE NATIONAL BOARD OF MEDICAL EXAMINERS

As is doubtless well known to the members of this body, for fourteen years or more there has been talk of a national board of medical examiners The confusion resulting from the fact that the licensing of physicians in this country rests with fifty individual licensing boards has emphasized the need for some national qualification which would be worthy of recognition by all states It was seen that no national body with legal powers could be established without first securing an amendment to the national constitution It was, therefore, quite evident that the board to have this matter in charge would need to be a voluntary organization and that its certificate, to be of value, would need to be based on unquestionable qualifications

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[1] The classification of Canadian medical colleges is as follows

Class A University of Toronto, Faculty of Medicine, Toronto, Ont, McGill University, Faculty of Medicine, Montreal Que

Class B Dalhousie University, Faculty of Medicine, Halifax, N S Montreal School of Medicine and Surgery, Montreal, Que Laval University, Faculty of Medicine, Quebec, Que, University of Manitoba, Manitoba Medical College, Winnipeg, Man

Class C Queen's University, Faculty of Medicine, Kingston, Ont, Western University, Faculty of Medicine, London, Ont

The University of Alberta at Edmonton, besides the premedical year, gives only the first two years of the medical course as measured by that of the medical schools of the United States This college was not inspected

This matter was brought into prominence a year ago when President Rodman, in his address, stated that such a board had been organized So little was known at that time in regard to the details of the organization, however, that this portion of the President's address was referred to the Council on Medical Education for further information The following report was adopted last year by the House of Delegates

> The scope of the address was very comprehensive and instructive That portion which calls for the action of your committee namely, the advisability of establishing a board of national examiners, contains material worthy of further consideration of the House of Delegates and it is recommended that it be referred to the Council on Medical Education

In accordance with these instructions, the Council on Medical Education held a business meeting in Washington, Nov 27 1915, the object of which was to examine into the organization, personnel and methods of the National Board of Medical Examiners The executive committee of the national board as then organized, on invitation, was present

It was learned that the completion of the organization of this board in so comparatively short a space of time was due to the fact that funds sufficient to allow the organization to be completed and to pay the running expenses for several years were generously donated by the Carnegie Foundation for the Advancement of Teaching This information was obtained by Dr Rodman only a few months prior to the giving of his annual address, and since the national board had been for so many years a matter in which he was personally interested, it was but natural that he desired to have the matter announced in his presidential address to the American Medical Association

The Council was favorably impressed with the personnel of the membership of this board, which was as follows Admiral W C Braisted, Surgeon-General, U S Navy, president, Commander E R Stitt, U S Navy, Gen W C Gorgas, representing the U S Army, Col L A LaGarde, treasurer, representing the U S Army, Surg-Gen Rupert Blue representing the Public Health Service, Asst. Surg-Gen W C Rucker, representing the Public Health Service, Herbert Harlan, representing the Federation of State Medical Boards, Isadore Dyer, New Orleans, Victor C Vaughan, Ann Arbor, Mich , Henry Sewell, Denver, Louis B Wilson, Rochester Minn , E Wyllys Andrews, Chicago, Horace D Arnold, Boston, Austin Flint, Jr, New York, and William L Rodman secretary, Philadelphia

As a result of its business meeting, although the Council was in favor of the general scheme of a national board of medical examiners, nevertheless, it felt that further investigation was necessary before it could actually endorse the board as organized Plans were completed at the Washington meeting for the symposium on the subject which was held at the twelfth annual conference in Chicago, Feb 7 1916 The Council also accepted the invitation to have a delegate present at a business meeting of the board which was to be held in Washington, November 29, just following the Council s meeting At that meeting the Council was represented by its secretary and by Dr H D Arnold, who as may be noted, is also a member of the national board

The discussions at the board's business meeting favorably impressed the Council's representatives It was seen that the members were determined to have the affairs of the board conducted in a manner above question Instead of the original plan to have representatives on the board from certain organizations of physicians, it was decided to have six representatives from the government medical services two each from the United States Army, Navy and Public Health Services, three members from the state licensing boards, chosen through their national organization, the Federation of State Medical Boards, and six other physicians to be appointed at large

The surgeons-general of the Army, Navy and Public Health Services are to serve as long as they hold their respective offices All other members were by lot divided into groups of four, their terms being two, four and six years, so that the term of office of four would expire every two years and their successors would be appointed for a term of six years

Another fact which was learned at the meeting of the board was that the qualifications of physicians admitted to the examinations were to be properly safeguarded The discussions indicated also that the examinations were to be thorough and comprehensive Although the investigation thus far had already produced favorable impressions in regard to the personnel of the board, its manner of perpetuation, its representation, the safeguarding of the applicant's qualifications, and the character of the examination, nevertheless it was determined to make no expression of approval until after the symposium on the subject should be given in February, where there would be opportunity for a full discussion of the problem from every point of view

The members of the House of Delegates who were in attendance at the February conference know how thoroughly the subject was discussed and how satisfactorily all criticisms of the board were answered The last criticism which the Council might have made against the proposition was corrected by the announcement from the secretary of the board that it had been voted to require as a minimum standard of preliminary education two years of collegiate work in addition to a four-year high school education This was important, since otherwise at the very beginning the board's certificate could not have been recognized in ten states, owing to the fact that that standard of preliminary education had been adopted in those states In regard to the organization of this board, the facts are set forth in more detail in the constitution and by-laws, which are as follows

THE NATIONAL BOARD OF MEDICAL EXAMINERS FOR THE UNITED STATES

PREAMBLE

The need of a standard licensing body for the whole of the United States and territories tributary has occasioned the organization of a voluntary board of examiners, selected from the Medical Corps of the Army and Navy and the Public Health Service with the other members selected from the Federation of State Examining Boards and the medical profession of the United States That the creation of this board may be certain and its continuance assured it is proposed that it shall be governed by the following constitution and by laws as set forth

CONSTITUTION

I *Name or Title*—The name of this body shall be the National Board of Medical Examiners for the United States

II *Official Domicile*—The domicile of this board shall be in Washington District of Columbia.

III *Objects*—The objects of this board are (*a*) the establishment of a standard of examination and certification of graduates in medicine through which the recipient may be recognized for the licensure in the practice of medicine in the United States territories, and extraterritorial possessions on presentation of the proper credentials of this board

(*b*) A cooperation with the Board of Medical Examiners in individual states, territories and extraterritorial possessions of the United States by which licensure may be effected through registration of the credentials of this board

(*c*) A consistent high purpose of determining the qualifications of the candidate before this board so as to create his eligibility to the privileges above defined

(*d*) A democratic administration of the operation of this board in its own executive function as well as in its examinations which are to be conducted by all modern means to accomplish practical oral and written tests of the candidates efficiency and qualification

(*e*) To hold examinations at the domicile of the board and at such other locations as may be justified by the number of applicants their residence and the facilities for conducting examinations properly

IV *Personnel of the Board*—This board shall initially consist of fifteen members as follows Admiral William C Braisted Gen William C Gorgas Gen Rupert Blue, Commander Edward R. Stitt Col Louis A LaGarde Asst Surg Gen William C Rucker Dr Victor C Vaughan Dr Horace W Arnold Dr Austin Flint Dr William L Rodman Dr Henry Sewall Dr E. Wyllys Andrews, Dr Louis B Wilson Dr Herbert Harlan and Dr Isadore Dyer

Services of Members of the National Board of Medical Examiners

The three Surgeons General are to serve as long as they hold their respective offices.

The others have been divided into groups of four, by lot their terms being two four and six years after incorporation as follows

	Two Years	Four Years	Six Years
Service	Pub Health (Rucker)	Army (LaGarde)	Navy (Stitt)
Federation			Harlan
At large	Wilson	Vaughan	Andrews
At large	Rodman	Arnold	Sewall
At large	Flint	Dyer	

Hereafter the board shall comprise the Surgeon General of the Medical Corps of the Army and one other representative of the same service to be appointed by the Surgeon General, subject to the approval of the board

The Surgeon General of the Medical Corps of the Navy and one other representative of that service to be appointed by the Surgeon General, subject to the approval of the board

The Surgeon General of the Public Health Service and one other representative of that service to be appointed by the Surgeon General, subject to the approval of the board

Three members appointed by the Federation of State Medical Examining Boards, subject to the approval of the board

Six members at large elected by the existent National Board of Medical Examiners

The terms of service of these members of the board shall be as follows The Surgeons-General of the Medical Corps of the Army, the Navy and the Public Health Service shall continue as members of the board so long as they hold their offices as Surgeons General Nothing in this provision shall preclude their reappointment as members of the board

The other twelve members of the board shall serve for six years each, with the provision that the first board shall be so constituted that four members shall serve for six years, four members for four years and four members for two years, these terms of office to be determined by the Executive Committee The four new members appointed for a term of six years, as provided above, shall be one from the three federal services one from the Federation of State Examining Boards, and two elected by the existent National Board of Medical Examiners

There shall be nothing in this regulation which will prevent any one of the four retiring members of the board succeeding himself, if qualified by proper appointment, but no member of the board may serve more than two successive terms

V *Organization of the Board* (*a*) The officers of the board shall consist of a president, a secretary and a treasurer, who, with two members at large all annually elected by the board, shall constitute the Executive Committee of the board The secretary need not be a member of the board In such case he shall not vote

(*b*) *The Duties of the President* The president shall preside at all meetings of the board, he shall direct all business of the board ad interim he shall be chairman of the Executive Committee, he shall decide all matters of rule and practice not provided for in these regulations and he shall represent, in person or by deputy, the board on all occasions when the board is officially engaged With the secretary or treasurer he may issue and sign all fiscal documents for the disbursement of funds

In the event of absence or death of the president, the board shall elect a chairman, who shall in all particulars fill the office of president pro tempore

(*c*) *The Duties of the Secretary* The secretary shall have conduct of all of the public relations of the board in conjunction with the president and the Executive Committee He shall supervise and direct all arrangements for meetings of the board, examinations of candidates for licensure, and he shall fulfil the office of recorder and keeper of records With the treasurer or president he may issue and sign all fiscal documents for the disbursement of funds He shall be also secretary of the Executive Committee.

(*d*) *Duties of the Treasurer* The treasurer shall be custodian of all funds he shall deposit all moneys in a national bank in the city of Washington, keeping proper accounts of all receipts and disbursements With the secretary or president he may issue and sign all fiscal documents for the disbursement of funds Before each annual meeting of the board, he shall have a proper audit of his accounts by a qualified accountant, who shall make report through the secretary He shall furnish bond, if the board so order

(*e*) *Duties of the Executive Committee* The Executive Committee in the intervals between board meetings shall transact all business of the board, directing, through the president and secretary, the detail of public announcements and operations as these may relate to the board, its objects, purposes and business The operation of the Executive Committee shall be made a matter of record for report to the board at its stated meetings with a view to ratification, but without necessity of referendum of such business as may be regular or routine and not affecting the policy of the board

The Executive Committee shall hold meetings on the call of the chairman, and as often as may be necessary or advisable

VI *Meetings* The regular annual meeting of the board shall be held at the domicile of the board on ———— in each year This annual meeting shall be held for the purpose of electing officers, of electing new members, of receiving reports of the several officers, of the Executive Committee, and for the transaction of any other business which may be on the table

Other meetings may be called by the president on his own initiative, and other meetings shall be called on the demand of a majority of members of the board, provided such members give the president two weeks' notice of said meeting and provided the president thereafter give two weeks' notice before the date of the called meeting

VII *Amendments* Amendments to this constitution may be made at any regular annual meeting of the board on thirty days' notice in writing and on a three fourths' vote of the members present

BY LAWS

I *Order of Business*
  (*a*) Roll call
  (*b*) Reading of minutes
  (*c*) Communications
  (*d*) Unfinished business
  (*e*) New business
  (*f*) Recommendation of candidates for licensure
  (*g*) Election of licentiates
  (*h*) Nomination of officers and members and Executive Committee
  (*i*) Election of officers
  (*j*) Adjournment

II *Conduct of Meetings* Parliamentary rules as set down in Robert's or Cushing's Manuals

III Dates of examinations for licentiates, regulation of examinations detail of subjects, and their assignment, scope and time allowance shall all be determined by the Executive Committee

IV Amendments to the by laws may be made at any regular meeting of the National Board of Medical Examiners by presentation in writing and by a two thirds vote of the members present

The thoroughness of the examination which has been planned by the board is set forth in the following

GENERAL SCHEME OF EXAMINATION OF CANDIDATES FOR LICENTIATE OF THE NATIONAL BOARD OF MEDICAL EXAMINERS

I PRELIMINARIES

Personal registration of candidates.

Review of credentials of candidates by board or by a qualification committee of the board

Assignment of candidates in groups for examination

II ARRANGEMENT OF EXAMINATIONS ACCORDING TO SUBJECTS AND DAYS

	A M	P M
First Day		
Anatomy and Its Divisions	Group 1	Group 2
Chemistry (and Physics)	Group 2	Group 1
Second Day		
Hygiene and Its Divisions	Group 1	Group 2
Materia Medica, Pharmacology and Therapeutics	Group 2	Group 1
Third Day		
Medical Jurisprudence (Forensic Medicine)	Groups 1 and 2	
Obstetrics and Gynecology		Groups 1 and 2
Fourth Day		
Medicine and Its Divisions	Group 1	Group 2
Surgery and Its Divisions	Group 2	Group 1
Fifth Day		
Pathology and Its Divisions	Group 1	Group 2
Physiology	Group 2	Group 1
Sixth Day		
Medicine at Hospitals and Clinics	Group 1	Group 2
Surgery at Hospitals and Clinics	Group 2	Group 1

III METHOD OF EVALUATING CREDITS IN EXAMINATION

Each examiner to base grades of paper on basis of 100

Grouped examinations by different examiners to be collated or arranged on basis of 100 per cent, allowing rates of credit according to importance of the unit represented by subdivision of subjects (for example Psychiatry, under Medicine, Operative Surgery, under Surgery)

All grades to be tabulated opposite the title or number assigned to candidate in separate lists for each general division of the examination.

All lists to be assembled and presented at a meeting of the entire examining board when each division should be reduced to a percentage based upon the following table of values

SUBJECT VALUES

1	Anatomy	100
2	Chemistry (and Physics)	50
3	Hygiene (and Sanitary Science)	50
4	Materia Medica, Pharmacology and Therapeutics	100
5	Medical Jurisprudence	50
6	Medicine	200
7	Obstetrics and Gynecology	100
8	Pathology	100
9	Physiology	50
10	Surgery	200
	Total	1,000

Passing grade to be 75 per cent average

One subject with grade below 50 per cent fails

Two subjects with grades below 70 per cent fails

Three subjects with grades below 75 per cent. fails

Candidates failing at the *first* examination before board may take a *second* examination after one year, a *third* examination will not be allowed

DETAIL OF SUBJECT DIVISIONS AND SUBDIVISIONS

WITH SUGGESTED NUMBER OF QUESTIONS AND SCOPE AFTER EXAMINATION BRIEFLY STATED

1 Anatomy	
Microscopic	
Embryology	3 questions 3 specimens for determination, etc.
Histology and Organology	5 questions 5 specimens for determination, etc
Neurology	3 questions 3 specimens for determination, etc.
Gross	
Osteology	3 questions 3 specimens for determination, etc
Dissection	3 questions Practical examination and demonstration to be determined by examiner
Applied	
Regional, Topographic, Surgical	3 questions Practical examination models sections etc, to be determined by examiner
2 Chemistry (and Physics)	
Organic	3 questions Practical examination at desk.
Physiologic	3 questions Practical demonstration at desk or written detail of experiment on test.
Physics	3 questions Practical demonstration at desk or written detail of experiment, etc
3 Hygiene (and Sanitary Science) Sanitary Chemistry	5 questions on general hygiene. Demonstration in laboratory of public health or 5 questions on laboratory tests, etc
Vital Statistics	3 questions
State Medicine	3 questions

4 Materia Medica, Pharmacology and Therapeutics	
Materia Medica	5 questions
Pharmacology	3 questions and laboratory demonstration, or 3 questions on laboratory experimentation
Therapeutics and Prescription Writing	5 questions, with examples of application of prescription writing
Electrotherapeutics (including Radiotherapy)	2 questions.
5 Medical Jurisprudence (Forensic Medicine)	5 questions
6 Medicine	
Theory and Practice	5 questions
Physical Diagnosis	Practical demonstration
Clinical Diagnosis	Practical examination on actual cases at bedside and clinic
Clinical Microscopy (Laboratory of Clinical Medicine)	Desk examination on specimens, etc, and three questions
Diseases of Nervous System (including Psychiatry)	3 questions
Diseases of Children	3 questions
Tropical Medicine	3 questions
7 Obstetrics and Gynecology	10 questions Requirement of cases attended, properly certified
8 Pathology (and Bacteriology)	
Bacteriology	5 questions and identifications of specimens outlines etc.
Microscopic Pathology	3 questions 3 specimens for determination, etc.
Gross Pathology (Necropsy, Autopsy)	3 questions and identification of specimens etc.
Surgical Pathology (Special Pathology)	5 questions and identification of specimens.
9 Physiology	10 questions (5 of which on subjects of text 5 on experimental or laboratory physiology)
10 Surgery	
General (including Minor Surgery)	5 questions
Operative Surgery	Practical demonstration.
Special Surgery	
Ear Nose and Throat	1 question
Eye	1 question.
Genito-Urinary	1 question
Orthopedics	1 question.
Radiology	1 question
Skin Diseases	1 question.
Syphilis and Venereal Diseases	1 question

Clinical diagnosis and treatment to be made subject of practical examinations at hospitals and clinics

Although no examinations have as yet been held, the Council feels confident that the certificates granted by this board will be worthy of acceptance by every state licensing board. The Council believes, further, that through the examinations given by this board the number of physicians in the Medical Reserve Corps who can be called on to aid the government in any national emergency will be greatly increased It was believed also that through the examinations conducted by this board an avenue will be provided by which reciprocal relations in medical licensure may be established with other countries, offers of which have already been made by some of the countries of South America

Recommendation

Considering the well arranged plan followed in the organization of this board, representing, as it does, two legal forces, namely, the government medical services and the state licensing boards, and considering the personnel of the board as it is now constituted, the plan for its perpetuation, the fact that finances have been generously provided for its maintenance for a number of years, the safeguards which have been established for the securing of reasonably high preliminary qualifications, and the arrangement for a comprehensive and thorough examination, the Council is glad to report that it can recommend the endorsement of this national board as it now stands

Respectfully submitted

Arthur Dean Bevan, Chairman,
William D Haggard,
James W Holland,
Horace D Arnold,
Robert C. Coffey,
N P Colwell, Secretary

Report of the Council on Scientific Assembly

It was moved that the Report of the Council on Scientific Assembly be received as printed in the Handbook and referred to the Reference Committee on Reports of Officers

Seconded and carried

The Report is as follows

To the Members of the House of Delegates of the American Medical Association

The Council on Scientific Assembly was constituted at the San Francisco session This, therefore, is our first report, and it must be regarded as a report of progress We have held one meeting at which were discussed various problems connected with the section work of the annual scientific assembly

You referred to the Council on Scientific Assembly the report of the special Committee on Sections and Section Work submitted to you at the San Francisco session We carefully considered this excellent report and in the main agree with it As emphasized in that report there is no doubt that too many meetings are being held at the same time, to the disadvantage of the Fellows who attend the annual session We further agree with the report that the duplication of subjects presented in different sections at the same time could, and should, be avoided

As to the former The remedy, of course, is to reduce either the number of sections or the number of meetings and also of papers that shall be read in a section As to reducing the number of sections It does not seem feasible to do this at least for the time being, although we might eliminate one or possibly two The Section on Hospitals was created five years ago and presented programs from 1912 to 1915 inclusive The registration has been extremely small—in 1912, 25, in 1913, 22, in 1914, 24 and in 1915, 26 This year, no program has been provided We recommend that this section be discontinued

As to reducing the number of papers We believe that this is possible, and that it could be done without in any way curtailing the value of the sections, in fact, that it would redound to the betterment of the sections

As a basis for classifying the sections regarding the maximum number of papers to be read before them, we suggest that the term "unit" be recognized and defined as meaning one meeting of a section held either in the forenoon or afternoon We recommend that the average number of papers assigned to a unit shall be six, and that the maximum number of units assigned to any one section shall be five. This will mean the discontinuance of the attempt to hold meetings on the morning of the fourth day of the Scientific Assembly This is practically the arrangement now being carried out Occasionally, one or two of the sections have met on the morning of the fourth day to complete their programs, but during the two annual sessions preceding this one, all the sections have adjourned on or before the close of the afternoon session of the third day

We recommend that, for the time being, to the following sections shall be assigned the number of units indicated

Practice of Medicine	5 units
Surgery General and Abdominal	5 units
Obstetrics Gynecology and Abdominal Surgery	5 units
Ophthalmology	5 units
Laryngology Otology and Rhinology	5 units
Diseases of Children	3 units
Pharmacology and Therapeutics	3 units
Pathology and Physiology	3 units
Stomatology	2 units
Nervous and Mental Diseases	3 units
Dermatology	3 units
Preventive Medicine and Public Health	3 units
Genito Urinary Diseases	2 units
Orthopedic Surgery	2 units

As to the duplication of subjects in different sections at the same annual session We believe that with the cooperation that will undoubtedly be rendered by the officers of the sections it will be possible in time so to arrange the programs that this duplication shall be entirely avoided We are not prepared at this time to make definite recommendations as to how this shall be accomplished, it is rather an important and more or less complicated subject, and we hope to study into it further with the cooperation of the section officers and make a more definite report later Connected with the problem, of course, is the fact that certain subjects in the past have been neglected, while too much time has been devoted to others no more important.

Before the reorganization in 1901, the delegates met in general meetings to transact the business of the Association At least one such general meeting was held on each of the first three days of the annual session, and at each of these general meetings an oration was delivered—one on practice, another on surgery, and another on state medicine After the House of Delegates was constituted, the general meetings were devoted to a meeting opening the scientific work of the session and to evening meetings at which the orations were delivered This proved unsatisfactory, it was overcrowding scientific work, and, as will be remembered, very few attended these evening gatherings to hear the orations The practice was, therefore, discontinued, and the different orations were then made optional with the three appropriate sections, only one of which now attempts to keep up the old form We, therefore, recommend that Section 3, Chapter XI of the By-Laws be amended by the elimination of the last sentence, which reads

"The Sections on Practice of Medicine, on Surgery, General and Abdominal, and on Preventive Medicine and Public Health may each elect a Fellow to deliver at the ensuing Scientific Assembly the oration on practice of medicine, the oration on surgery and the oration on state medicine before their respective sections"

As stated at the beginning of this report, your Council on Scientific Assembly feels the responsibility that has been placed upon it, and realizes that changes should be made only after due deliberation both on the part of the Council itself and on the part of the House of Delegates We therefore ask your action at this time on four things only (1) adoption of the definition of the word "unit", (2) The tentative adoption of the number of units assigned to the sections, (3) the discontinuance of the Section on Hospitals, and (4) the modification of the By-Laws regarding orations

Respectfully submitted

J SHELTON HORSLEY, GEORGE H SIMMONS,
E S JUDD, ALEXANDER R CRAIG
ROGER S MORRIS,

Dr Dwight H Murray, New York, moved that the following be submitted to the Reference Committee along with the Report of the Council on Scientific Assembly, namely, a recommendation that the Section on Stomatology shall be modified by adding thereto the subjects of Gastro-Enterology and Proctology, and that the Section as reconstituted be accorded three units

Memorial Resolution

Dr Arthur T McCormack, Kentucky, moved that when the House of Delegates adjourns, it adjourn in honor of the memory of Dr William L Rodman, Dr Frank J Lutz, and Dr Henry B Favill, who were respectively the President, a Trustee, and a Chairman of the Council on Health and Public Instruction

Seconded and carried

Report of Committee on Red Cross Medical Work

Dr George M Kober, District of Columbia, Chairman, presented the Report of the Committee on Red Cross, which was referred to the Reference Committee on Reports of Officers

The report is as follows

To the Members of the House of Delegates of the American Medical Association

A Committee on Red Cross Medical Work was created at the 1912 session in accordance with Section 3 of Chapter VIII of the By-Laws

The object of this committee is to stimulate in every county medical society the creation of a committee on Red Cross medical work so as to provide a body of representative physicians of approved qualification to direct or participate in medical work carried on by the Red Cross in different localities in times of war or emergencies and to advise with the representatives of that society in handling medical and sanitary problems incident to such an occurrence

It is desired to have in every county a central committee of five physicians, two of whom shall be the president and secretary of the county medical society, ex officio The president of the county medical society shall select the other three members, preferably from the list of councilors or of the executive committee This committee shall be designated the "Committee on Red Cross Medical Work" The names and residences of the members, immediately after organization, should be reported to the chairman of the American Medical Association committee In case of disaster requiring relief action by the Red Cross, these county committees will be called on to nominate qualified medical men in their respective counties for Red Cross service The committees will also serve in an advisory medical capacity to the Red Cross in time of disaster and in other lines of Red Cross activity as indicated in a preceding paragraph

Up to May 1, 1916, 588 county medical societies, located in forty-eight states, inclusive of the District of Columbia, have created committees on Red Cross medical work, and 2,940 representative men of the medical profession are available to render valuable assistance to the American Red Cross in any of its activities

During the present European war many of these committees have been called on by Major Robert U Patterson, Medical Corps, U S Army, and Chief of Bureau of Medical Service of the American Red Cross, to report on the qualifications of physicians and surgeons offering to serve the Red Cross in Europe The indorsements have been invaluable in the selection of men, as it is highly important that reputable men only be chosen, in order to protect the American Red Cross and the reputation of the medical profession whom they represent abroad Some of the committees have been called on to act as instructors and judges in contests organized by the First Aid Department of the Red Cross, for miners, railway service men, industrial workers, etc

NUMBER OF COUNTY MEDICAL SOCIETIES BY STATES WHICH HAVE APPOINTED COMMITTEES ON RED CROSS MEDICAL WORK

Alabama	8	Nebraska	12
Arizona	7	Nevada	1
Arkansas	14	New Hampshire	5
California	16	New Jersey	8
Colorado	8	New Mexico	6
Connecticut	6	New York	31
Delaware	1	North Carolina	6
District of Columbia	1	North Dakota	5
Florida	6	Ohio	33
Georgia	11	Oklahoma	18
Idaho	1	Oregon	4
Illinois	43	Pennsylvania	35
Indiana	44	Rhode Island	6
Iowa	27	South Carolina	6
Kansas	12	South Dakota	5
Kentucky	14	Tennessee	13
Louisiana	6	Texas	42
Maine	5	Utah	2
Maryland	1	Vermont	5
Massachusetts	15	Virginia	10
Michigan	14	Washington	5
Minnesota	9	West Virginia	8
Mississippi	11	Wisconsin	11
Missouri	21	Wyoming	1
Montana	5		
Total		588	

The Reference Committee on report of the officers at the session of the House of Delegates held June 21 to 24, 1915, deemed it advisable that the activities of your committee be directed through the state association rather than with the county societies directly This course will hereafter be pursued in spite of the considerable delay caused thereby

The American Red Cross in order to aid in the general cause of preparedness will appoint a national committee on Red Cross medical work for the purpose of coordinating the work of state and county committees with the various activities of the Red Cross A copy of the proposed regulations of the national committee on Red Cross medical service is herewith submitted (see Appendix A) It is believed that the central committee will approve these regulations at a meeting to be held during the month of May Upon the approval of these regulations it is the intention of your committee to renew its activities through the state medical societies, with the hope that the efforts will stimulate into existence the creation of committees on Red Cross medical work in all state and county societies which have not yet responded to the general call of preparedness

Your committee respectfully recommends that the President of the American Medical Association invite the attention of the state medical societies to the desirability of prompt organization of state and county committees on Red Cross medical work, so that the American medical profession may be prepared to respond should the country need their services

Respectfully submitted

George M Kober, Chairman
William J Lyster,
Medical Corps, U S Army
R. C Holcomb,
Surgeon U S Navy

Appendix A

REGULATIONS OF THE NATIONAL COMMITTEE ON RED CROSS MEDICAL SERVICE

REVISED BY THE SPECIAL COMMITTEE TO WHICH THEY WERE REFERRED BY THE EXECUTIVE COMMITTEE, FEB 12, 1916
FINAL DRAFT AS APPROVED BY THE COMMITTEE, MAY 3, 1916

Organization—The National Committee on Red Cross Medical Service shall consist of forty-six (46) members, thirty-six (36) to be appointed by the Central Committee of the American Red Cross, and ten (10) ex officio members The former shall be appointed, twelve to serve for one year, twelve to serve two years, and twelve to serve three years, and thereafter when vacancies occur the appointments to fill them shall be for three years The ex officio members shall be

The Surgeon General, U S Army
The Surgeon General, U S Navy
The Surgeon General, U S Public Health Service.
President American Medical Association
President, Congress of American Physicians and Surgeons
President, American College of Surgeons
The Director General of Military Relief
The Director General of Civilian Relief
The Chief of the Medical Bureau
The Chairman of the National Committee on Red Cross Nursing Service.

The director general of military relief shall be the chairman of this committee, and the chief of the medical bureau shall be its secretary, and its records shall be filed in the office of the former

No person shall be deemed qualified to be a member of the national committee who is not a member of the American Red Cross

Duties of the Committee—The duties of the national committee shall be as follows

To organize the medical service of the American Red Cross

To make uniform rules for enrolment.

To have general supervision over the work of state and other aids and committees organized for Red Cross work under agreement with the Presidents of the American Medical Association, the Congress of American Physicians and Surgeons and the American College of Surgeons

To aid the director general of military relief in the organization of field and hospital columns and the providing of the medical personnel for the same

To study the medical service of the Red Cross in other countries

The resolutions of the national committee shall be carried out as to administrative details by its secretary, and its routine business transacted by an executive committee of three appointed jointly by the President of the American Medical Association, the President of the Congress of American Physicians and Surgeons, and the President of the American College of Surgeons The chairman of the national committee shall be ex officio chairman of the executive committee. This committee shall have authority to receive and file in the national office of the Red Cross the applications and credentials of all physicians who have been approved by local committees or aids for enrollment as Red Cross medical officers, to enroll them and to issue them cards of appointment, to keep at the national office card catalogues of state and local committees, aids, and of enrolled physicians, to distribute blank forms of enrollment, and to give the necessary instructions to state and county committees

Assignment to Duty—Assignment to duty in case of war will be by the director general of military relief, in consultation with the surgeon general of the military service to which assignment is to be made Assignment in case of disaster to the civil population will be by him, in consultation with the director general of civilian relief

Meetings and Reports—The National Committee on Red Cross Medical Service will hold two meetings each year—one in Washington about the time of the annual meeting of the American Red Cross, and one at the time and place of the meeting of the American Medical Association Special meetings may be held on the call of the chairman, or at the request of one third of the committee members Nine (9) shall constitute a quorum at any meeting

Reports of the year's work shall be made to the chairman of the central committee at the time of the annual meeting of the American Red Cross in Washington

STATE COMMITTEES

State committees shall consist of not more than nine (9) physicians, who shall be members of the American Red Cross, and selected three members each by the President of the American Medical Association, the President of the Congress of American Physicians and Surgeons, and the President of the American College of Surgeons (one of them to be the president of the state medical society) This committee shall elect its own chairman and secretary, and shall hold annual meetings at the time and place of the state medical society meetings

Each state committee of the American Red Cross Medical Service shall be entitled to one delegate to the annual meeting of the American Red Cross held at Washington on the Wednesday preceding the second Thursday in December

Duties of State Committees—State committees shall correspond with county medical societies and other individuals or societies with reference to the organization and work of local committees or aids

They shall report to the chairman of the National Red Cross Medical Committee, at Washington, D C., the formation of all local committees, with the names and addresses of the members of the same

They shall have power to recommend to the national committee the dropping from a local committee of any member of such committee for reasons deemed by them sufficient, and shall report such action to the chairman of the National Red Cross Medical Committee at Washington

LOCAL COMMITTEES

Local committees shall be identical in membership with the Committee on Red Cross Medical Work appointed by the presidents of the state committees, provided that each member so appointed is or becomes a member of the American Red Cross

Duties of Local Committees—Local committees, in their capacity as representatives of the National Committee on Red Cross Medical Service, shall distribute blank forms for enrolment, provided by the National Red Cross Medical Committee, such forms to provide for enrolment for service in case of war as follows

Class A To consist of physicians willing to serve wherever needed, at home or abroad in field, hospital, supply columns, or intelligence sections

Class B To consist of those willing to serve in the home country only

Class C To consist of those willing to serve at place of residence only

They shall distribute forms also for enrolment in case of disaster under the three classes above specified

To determine whether applicants meet requirements and are desirable

To forward to the state committee applications for enrolment, with credentials and proper recommendations, including applications not recommended for acceptance

To recommend annulment of enrolment for sufficient cause, after proper investigation and granting a hearing to the physician concerned, forwarding all papers through the state committee to the chairman of the national committee at Washington for the final action of the national committee

To disseminate among physicians in good standing information as to the requirements of the medical service

Local committees shall meet at the call of the chairman, preferably at the time of the meeting of the county or other local medical society, and the secretaries of such committees may procure information, blank forms, necessary supplies, and the refundment of expenses and postage used in the correspondence of the committee about Red Cross matters, by application to the secretary of the National Red Cross Medical Committee, Washington, D C

RULES FOR ENROLMENT

Application for enrolment shall be made through the local committee, or on recommendation of a member of the National Red Cross Medical Committee

Blanks shall be filled out in the applicant's own handwriting

Requirements for Enrolment—The candidate for enrolment must be between 25 and 50 years of age, a graduate of a recognized medical school, licensed to practice in one of the states, and must be recommended by a local or state committee, or a member of the national committee on medical service In special cases physicians and surgeons may be enrolled by the national medical committee without reference to the above-named requirements, because of recognized special fitness and professional distinction

Full details will be furnished by the secretary of the national committee, at Washington

All persons, of whatever class, shall, if practicable, pass a satisfactory physical examination before being accepted for active service

All physicians enrolling must become members of the American Red Cross

Appointment and Badge—Certificates of appointment will be provided to all who enroll themselves

Resignation—A physician may resign, but should do so in writing to the secretary of the national medical committee through the county committee

Uniform—The uniform prescribed by the American Red Cross, and approved by the War Department, will be worn during service in time of war In time of disaster the usual civilian dress shall be worn Uniforms will usually be worn by organized units, such as field columns for drill inspection, camps and parades

Physicians are not at any time to wear Red Cross brassards without especial authority from the American Red Cross, and then only when engaged in active relief work In the event of war, such brassards can be issued only with the consent of the War or Navy departments

Physicians need not respond to a call for service in time of peace when such response would seriously interfere with duties already assumed, but in the event of war in which the United States may be involved, all Red Cross physicians would be expected to report to the chairman of the national medical committee at Washington, D C, the earliest possible date on which they could be available for active service in the class in which enrolled, and should thereafter hold themselves in readiness

Compensation—An enrolled physician called on for active service under the Red Cross will receive the same pay as is provided by law for a major in the United States Army medical corps in case his appointment is as a director, the pay of a captain, medical corps, for an assistant director, and that of lieutenant in the medical corps for a staff physician or surgeon, with proper maintenance, traveling expenses and laundry allowance

First Aid and Life Saving Courses—The National Committee on Red Cross Medical Service should interest itself in extending to the industrial employees of the country instruction in first aid and in life saving which are under the direction of the Medical Bureau of the American Red Cross

Dr Aruthur T McCormack, Kentucky, moved that the House of Delegates adjourn until Tuesday, 2 p m

Seconded and carried

Accordingly, the House thereupon adjourned

ADDENDUM

Report of the Judicial Council

[See page 1944, substitute for first four lines]

Dr Alexander Lambert, New York, Chairman, presented the Report of the Judicial Council, together with an addendum, reporting the action of the Judicial Council in disciplining members He followed this report with the report of the sub-committee of the Council on Health and Public Instruction on Social Insurance Following is the report on Discipline of Fellows

DISCIPLINE OF FELLOWS

During the year there has come before the Judicial Council one case for discipline During August and September, 1915, there was furnished to the secretary of the American Medical Association evidence in support of a charge that Dr George Ben Johnston of Richmond, Va, had been guilty of unprofessional advertising, that in a certain daily newspaper in Richmond, Va, Dr Johnston had caused to appear a cartoon of himself for medical advertising purposes and had paid for it himself This evidence was in the form of a letter addressed to the secretary of the American Medical Association from Dr Charles V Carrington of Richmond, Va, and supported by copies of correspondence between Dr J Shelton Horsley and the office of the newspaper which printed the cartoon The authenticity of these letters was confirmed by the secretary of the Association writing directly to Dr Horsley In addition, correspondence between the secretary of the Association and Dr Robert C Bryan, of Richmond, and other letters concerning this and other charges against Dr Johnston were presented to the Council In pursuance of the standing rule passed in San Francisco in June, 1915, that the secretary of the American Medical Association shall file charges with the Judicial Council against Fellows of the Association when overt acts on the part of such Fellows, supported by reasonable evidence, are brought to the attention of the secretary of the American Medical Association, the secretary of the American Medical Association transmitted the following letter to the Judicial Council

"Gentlemen The attention of the secretary of the American Medical Association has been called to a cartoon published in the Richmond *Evening Journal* for Jan 15, 1915, the subject of which is Dr George Ben Johnston of Richmond, Va, a Fellow of the American Medical Association, and to the photographic reproduction of the form of contract entered into by the Richmond *Evening Journal* and the subjects of a series of cartoons of which this of Dr Johnston is one, for the publication of these cartoons, together with correspondence which seems to establish the fact that Dr Johnston was a party to the publication of the cartoon in the Richmond *Evening Journal*, issue of Jan 15, 1915

"Consequently, in compliance with the standing rules adopted by the House of Delegates, the secretary charges Dr George Ben Johnston of Richmond, Va, with unprofessional conduct, in that he caused to appear in Richmond, Va, a cartoon calling attention to himself and his professional work in a manner contrary to Section 4, Article 1, Chapter II of the *Principles of Ethics* of the American Medical Association"

A meeting of the Judicial Council was duly set for Nov 5, 1915, to hear these charges At this meeting of the Judicial Council Dr George Ben Johnston appeared in person to answer to the charges The charges were read The chairman advised Dr Johnston of his rights and of the procedure of the Council Dr Johnston then stated that he had contracted and paid for the caricature complained of, as had also many prominent and reputable citizens of Richmond, including two other reputable physicians, without, however, any thought or expectation of professional advantage to be gained from it, as, in his opinion, such newspaper notice could not be of any professional advantage to a physician but, on the contrary, it might work an injury Dr Johnston further stated that he was actuated solely by the fact that many of his friends and neighbors of the highest standing in his community had signed the same contract form for cartoons of themselves He further stated that he did not see or instigate the reading matter attached to the cartoon and had no intimation of what would be printed in connection with his caricature and that he was humiliated by what appeared in that connection

There were further matters presented stating gross professional derelictions on the part of Dr Johnston These matters were not in the charges filed with the secretary of the American Medical Association and were therefore judged extraneous matter and could not come before the Judicial Council for its consideration Dr Johnston asked the opportunity to show animus in the matter of the charges, which opportunity was given him Dr Johnston produced a letter from Dr Stuart McGuire of Richmond, Va, in which Dr McGuire stated that he had been induced to permit a cartoon of himself to be published in this same *Evening Journal* of Richmond, for which he had also paid Dr McGuire went on to say that some weeks after the appearance of the cartoons of Dr George Ben Johnston, Dr W T Oppenheimer and Dr McGuire a letter was received by Dr McGuire from Dr H C Smith of Crewe, Va, who condemned his course for permitting the cartoon in the *Evening Journal* and who notified Dr McGuire that he, Dr Smith, had preferred charges to the Richmond Academy of Medicine and the Medical Society of Virginia against Dr Johnston, Dr Oppenheimer and Dr McGuire for unprofessional conduct Dr McGuire replied to this that he would welcome an opportunity to explain the circumstances which had led to the alleged violation of the Principles of Ethics, that he had afterward received a message from Dr Smith saying that the charges were withdrawn

Dr McGuire further stated that about this time Dr Charles V Carrington came to his office, the object being to ask Dr McGuire to take no action that would revive the charges and lead to an investigation by the local society, and that Dr Smith had been induced to withdraw his charges because it was believed that while the Judiciary Committee would exonerate Dr Johnston, Dr Oppenheimer and Dr McGuire of having intentionally done anything wrong the charges at that time would injure Dr McGuire Dr Carrington said that while he did not wish to hurt Dr Oppenheimer or Dr McGuire, he did wish to use the incident at some future occasion to injure Dr Johnston This statement Dr McGuire further said had been submitted to Dr Carrington, and Dr Carrington's recollection of the interview differed materially from Dr McGuire's Dr McGuire attached Dr Carrington's written version of the conversation from which it appeared that when Dr Carrington heard that Dr Smith had preferred charges against Drs Johnston, Oppenheimer and McGuire that he, Dr Carrington, had agreed with Dr Horsley to make every effort to have Dr Smith withdraw his charges against all these gentlemen, temporarily at least, because they believed the charges would injure Dr McGuire whom Dr Carrington believed to be unjustly accused of wrong doing Dr Carrington further stated that he believed even if charges were not withdrawn and the Richmond Academy of Medicine entertained them, all three of them would be exonerated Dr Carrington said at the time he went to see Dr McGuire to discuss these charges against Dr McGuire, he had no idea of preferring charges in this matter against Dr Johnston in any society, or of using it against Dr Johnston in any way at any future time Dr Carrington acknowledges however that he told Dr McGuire that while as Dr McGuire's friend he was interested in trying to help Dr McGuire out of an embarrassing situation, he had no such feeling for Dr Johnston and did not care how badly Dr Johnston was hurt Dr Carrington further states that after this conversation with Dr McGuire he (Dr Carrington) and Dr Horsley wrote a letter to Dr Smith in consequence of which Dr Smith withdrew his charges against all three

The Judicial Council believes that this is a type of case that should have been dealt with by the local medical societies before it should have been brought for action to the Judicial Council. The Judicial Council therefore, deprecates the withdrawal without trial or opportunity for defense by the accused, of these identical charges from the Richmond Academy of Medicine after being filed therein The Judicial Council does not condone or minimize unethical advertising in this or any instance, but the Council does believe that the matter complained of was inadvertent and thoughtless and was done with no thought of professional gain or personal advantage In view of this and the attitude of Dr Johnston in the premises, the Council believes that the facts elicited do not constitute sufficient cause for action, and the Council therefore acquits Dr Johnston of any intent whatsoever to violate the Principles of Ethics or to do an unprofessional act

Respectfully submitted

Alexander Lambert, Chairman,
James E Moore,
Hubert Work,
A B Cooke,
Randolph Winslow,
Alexander R Craig, Secretary

[See p 1945 Add first column, four lines from the bottom after the words "of the Scientific Assembly"]

It was further suggested to me this morning by Dr Simmons that a further amendment to the By-Laws should be considered in this connection—namely, that the general meeting of the American Medical Association should be changed from Tuesday morning to Tuesday evening, making the general meeting occur the evening before the meeting of the sections The Scientific Assembly, therefore, would begin on Wednesday morning and a half day of time could thus be saved

[See p 1985 Add second column following signature of Dr Alexander Lambert]

Dr Arthur T McCormack, Kentucky, moved that the House of Delegates extend its gratitude to Dr Lambert and his Committee on Social Insurance for the complete and exhaustive report that they had made

Seconded and carried

The report was referred to the Reference Committee on Amendments to the Constitution and By-Laws

(To be continued)

Factory Inspector's Report.—The report of the Illinois State Factory Inspector for 1914-1915 shows that 32,981 child labor inspections in 32,260 establishments were made during the year, which was an increase of more than 5,000 inspections over the previous year There were 156 convictions for infractions of the Child Labor Law, which provides that children under 14 shall not be employed in the industries At the sessions of the last legislature it was endeavored to have the limit raised to 16 years, but this failed The chief factory inspector favors raising the working age, among other reasons, because a physical examination before entering employment will be required of all workers in the near future, and he believes that beginning work at too early an age will so weaken and prevent the development of children that later when examinations are required many of them will fail of employment The state now has a ten-hour law for women and inspections disclose that in many instances they are worked longer than that. Two hundred and eighty-one prosecutions were brought for such violations The workmen's compensation act was improved by the last legislature and the minimum compensation for injury resulting in death was raised to $1,650, and the weekly compensation to $6 as a minimum Under the occupational disease law, 595 inspections were made and a few orders for compliance issued It is said more orders were not issued because many establishments have about completed installations in compliance with the law on previous general orders issued by the department Under the Health, Safety and Comfort Law, nearly 7,000 inspections were made in as many establishments, and over 39 000 orders were issued to correct defective and dangerous conditions in buildings, with reference to sanitation power transmission dangerous machines, etc. The law allows thirty days to comply with such orders On reinspection it was found that over 29 000 of these orders had been complied with Ventilation inspections under this law showed 245 violations out of 254 workrooms examined

Medical News

PARIS LETTER

(Continued from page 1935)

The War

VENEREAL DISEASES IN THE ARMY

The various districts have just made a statistical return of the venereal diseases treated during the months of January and February, 1916, and from these returns, which are for the whole of the troops, including those at the front and those in the interior of the country, the following figures have been taken

Gonorrhea	7,813
Chancroid	962
Primary or recent syphilis	2,987
Total	11,762

Of this total of 11,762 infections, 9,419 have been proved to be contracted in the interior of the country This figure serves as the best indication of the existence and persistence of foci of contagion in the different districts, outside of the zone of the army

The undersecretary of state for the medical service has communicated these significant figures to generals in command of the districts, begging them to do their utmost, in cooperation with the civil authorities, to take every step necessary to stamp out the development of venereal diseases and to encourage every initiative and to avail themselves of every help with the view of checking the excessive prevalence of these diseases

TREATMENT OF ABDOMINAL WOUNDS AT THE FRONT

This subject has given rise at the Societe de chirurgie de Paris to a very interesting exchange of views Dr Tuffier of the Faculte de medecine de Paris was thought not to have been sufficiently categoric in the condemnation of the method of abstention, and had expressed himself as partisan of intervention only when the surgeon's equipment and the condition of the wound were such as to promote a favorable prognosis Professor Quenu opposed this opinion vigorously Quenu refuses to admit that soldiers with abdominal wounds should be abandoned to their fate because of insufficiency of the means of treatment The means of treatment exist, it will be sufficient to multiply during the period of actual battle the organizations for using them and to accumulate the latter where the most wounded congregate Drs Delbet, Rochard, Monprofit and Broca were of the same opinion, and the latter moved a resolution for a public pronouncement on the part of the Societe de chirurgie in favor of early intervention in abdominal wounds The societe passed this resolution unanimously In addition, a resolution was passed that, in order to insure for the seriously wounded, and especially those in whom early intervention has a considerable influence on the possibility of success, the automobile ambulances should be concentrated at the point where the most wounded are assembled according to needs and for the time necessary

RESECTION OR AMPUTATION

In serious wounds of the knee, elbow, hip and foot should the limb be amputated? Ought we to limit ourselves to the resection of the injured articulation? Drs Tuffier and Nove-Josserand, in a communication to the Academie de medecine, as the outcome of the study of the functional results given by resections, conclude that this operation should always be preferred to amputation, for it always leaves a limb more useful than any apparatus, whatever may be the perfection of the latter Amputation is justifiable only to save the life of the patient when, for that purpose, resection of the articulation would be insufficient One may have to practice such a resection either immediately after the infliction of the injury or later, in consequence of serious suppuration, or still later to increase the mobility and strength of the limb They give the results of 1,810 cases made up as follows 630 elbows, 350 shoulders, 282 knees, 231 ankles, 152 wrists, 122 hips, 29 posterior tarsus and 14 anterior tarsus Tuffier and Nove-Josserand state that for the shoulder joint the functions in the limb are good in 48 per cent of cases At the elbow results are variable, depending on whether or not the excision has taken place immediately after the infliction of the wound In the former case the functional results are not encouraging (30 per cent good), but still they are much better than would be given by an artificial forearm Secondly, the results are but little better (32 per cent) Approximately the same figures are obtained for the wrist For the lower limbs, on which they have performed 20 per cent fewer resections than on the upper limb, the operation at the hips gave about 75 per cent of favorable results A patient walking, with or without the help of an apparatus, is always at any rate better off than with a false limb As to the knee, in this case mobility is not sought by the operation, on the contrary, to give a really useful limb rigidity is necessary This result was obtained in 95 per cent. of the cases, but when this operation is performed immediately after the wound, the results, both as regards the life of the patient and the functions of the limb, are much superior to those which one obtains when the articulation is removed for suppuration The same is true for the operation on the foot

It is probable that the reason why these operations have not been more often practiced is that they are always laborious, very often difficult and can be carried out in a satisfactory manner only by experienced surgeons The instructions given long ago by the Lyons surgeon, Ollier, are those which one should follow to obtain the best results

INJUDICIOUS OPERATIONS ON THE EYE FROM A MILITARY POINT OF VIEW

In a previous letter I have mentioned Dr E Valude's opinion according to which wounded soldiers suffering from traumatic cataract of one eye should not be operated on if the other eye is intact and normal (The Journal, March 27, 1915, p 1089) Valude insisted on the fact that in such cases intervention cannot possibly produce in the vision any improvement of military value, and that a slight advantage in case of a successful result had to be set off against the danger of serious sequelae in operating early on cataracts, these traumatic cataracts being particularly liable to infection, especially in young subjects Finally, one has to face the possibility of a disastrous sympathetic ophthalmia consecutive to complications in the operated eye. In his original communication he spoke of this danger only as theoretical, but he has just observed a case in a soldier, aged 23, who, October 8, received from a shell fragment a serious contusion of the right ocular region without a wound As a result of this there was a traumatic cataract of the right eye but absolute integrity of the left eye He was transported to an ophthalmologic field hospital where he underwent an operation for the cataract, about December 7 Cyclitis resulted, and almost immediately an ultramalignant sympathetic ophthalmia of the left eye This soldier presents the signs of iridochoroiditis of the most formidable hemorrhagic type. Blindness is, of course, inevitable The result, from the point of view of the patient, is blindness at 23 years of age, and from the point of view of the state, first, a military unit lost, and, secondly, the highest pension to be paid to the patient, all because of an attempt to restore the vision which, in any case, would have been very imperfect and which would have been useless for military purposes

Valude is also of the opinion that the operation for strabismus should not be practiced in a military hospital The result cannot be of any military value

THE OCCUPATION OF SCHOOLS AS MILITARY HOSPITALS

The minister of public instruction has just received from the Federation des associations de parents d'eleves de lycees et colleges (Federated Association of the Parents of High School and College Pupils) a letter with regard to the prolonged occupation of a large number of schools as military hospitals To this letter were annexed complaints from different associations concerning the high schools of Paris, Algiers, Bordeaux, Grenoble, Limoges, Marseilles and Montpellier The inconvenience produced by the present situation was summed up in this way by the federation, overcrowding of the pupils in makeshift buildings which are altogether inadequate and very often insanitary, disturbance of the course of study, and dangers of epidemic.

DELAYED TETANUS

An interesting discussion took place at the Reunion medicale de la IV-e armee on the subject of delayed tetanus and of the preventive efficacy of antitetanic serum Dr Potherat, surgeon of the Paris hospitals, reported two characteristic examples In spite of the treatment by Baccelli's method and the administration of large doses of chloral one of the patients died, but the other recovered In the first patient the tetanus manifested itself three weeks after the receipt of the wound, in the second there was an interval of more than two months In the latter a fragment of shell which had escaped notice was left behind and was removed after roentgenoscopy The former, whose humerus had been smashed immediately below the tuberosities, had retained, among the irregularities of the scapular fragment, portions of clothing which were not detected by digital exploration or removed by washing Potherat attaches great importance to the presence of foreign bodies and in particular to fragments of clothing as bearers of tetanus bacilli in suppurating wounds Antitetanic serotherapy however certain and undeniable may be its preventive value, can never be depended on to overcome all the causes favoring development of tetanus It is efficacious but not infallible, and one must not neglect to supplement it by practices which have justified themselves in many a circumstance. These consist of free exposure of irregular and soiled wounds, the systematic ablation of necrosed or necrosing parts, the removal of all substances such as foreign bodies, which can be bearers of the tetanus bacillus, and finally careful and abundant washing with solutions which set free oxygen Though the objective phenomena are less violent in delayed tetanus than in the early form, it is erroneous to suppose that for this reason delayed tetanus is less serious, fatal results being quite common.

Dr Paul Boucher has reported two cases of delayed tetanus differing much from one another In the first case there was a penetrating wound of the chest due to a fragment of shell This patient received a prophylactic injection of antitetanic serum (10 c.c.) on the day of his reception at the ambulance, which was also the day on which he was wounded On the twentieth day, thoracotomy was performed for purulent pleurisy and the projectile was removed Tetanus made its appearance on the twenty-third day and was fatal Only one injection of serum had been given The second case belongs to a category which it will never be possible to avoid A man suffered a fracture of the vertebral column There was no perceptible external breach of continuity of the skin, nevertheless the man developed tetanus on the tenth day after the injury and he died One prophylactic injection had been given.

Dr Vincentelli brought forward a case of a man, aged 32, wounded by shell fragments in the two calves, in the shoulder and in the buttocks Each of these wounds narrow but very deep provoked a gangrenous phlegmon with fetid pus In the twenty-four hours which followed the receipt of his wound this man had one injection of antitetanic serum which was also the last. After five days' traveling he arrived at the hospital where the four phlegmons were opened up, drained and freely washed The pus and the fever disappeared almost completely Ten days later fragments of shell of clothes and of the right fibula were removed Everything seemed to be going on normally except that there were a very marked pallor and bluish venosities over the whole body whose origin it was difficult to explain Moreover, there was observed an excessive excitability of the muscles of the incised calf Twenty-three days after the receipt of his wound and after the only injection of serum and eight days after the second surgical intervention he was seized with tetanus which proved fatal in forty-eight hours

From these facts it may be concluded that the prophylactic action of antitetanic serum is of short duration, in some cases it has not extended beyond eight days Therefore in wounds with persistent suppuration the injection must be repeated every week.

Suppression of Rag Picking in Paris

At the Academie de medecine Dr Wurtz of the Faculté de medecine de Paris in the name of the Section of Public Hygiene, Legal Medicine and Medical Police read an important report on the question of suppression of rag picking in Paris The report demands that for reasons of public health, this practice should be suppressed in the capital and its neighborhood both on private premises and on the public streets The sorting of garbage should be undertaken solely in the municipal destructor works Garbage cans and wagons should be hermetically closed

An American Honored

Miss Edith Wharton an American citizen and writer has just been appointed, by decree chevalier of the national order of the Legion of Honor in recognition of her charity and her devotion to benevolent works

Miscellany

Medical Supervision in Industry

Dr A B Emmons, 2d, director of appointments for the medical alumni of the Harvard Medical School, in a recent article (Industrial Medical Supervision, *Boston Med and Surg Jour*, April 6, 1916, p 495) presents an account of the results of medical supervision in a factory employing from 700 to 1,100 workers, chiefly unskilled The factory in question manufactures candy, about two thirds of the employes are women The medical supervisor's duties are (1) to see that every employee who comes into contact with the candy or any of its ingredients is free from communicable disease, (2) to see that every new employee is physically fit for work, and (3) to keep the employees in good health Foremen or forewomen are instructed to report any worker who presents a cough, a rash or any other sign of physical ailment, in addition, the medical supervisor inspects every department, besides keeping office hours three times a week in the factory A graduate nurse is on duty all the time Every employee must be successfully vaccinated before he enters on his position, if he is temporarily absent from work, his health must be certified by the medical supervisor before he is allowed to resume his task. All persons suffering from venereal disease or tuberculosis, or addicted to the habitual excessive use of alcohol, are discharged, the first class because they constitute a danger to others, the second because employment in a factory is injurious to themselves as well as dangerous to others, and the third because to keep such persons near high-power machinery is to court disaster Employees affected with transmissible diseases are excluded from handling candy until they are well If some particular form of work affects an employee injuriously—for instance, if a man strains his back lifting barrels or a girl develops flatfoot from too much standing—the physician confers with the superintendent and secures a change of work for that employee The service is without cost to the employees The testimony of all concerned is that the medical supervision is of value to the employer in the greater efficiency of the working force, to the employees in the increased comfort and physical well-being secured, and to the public in the guarantee of a sanitary product It would seem that manufacturers of food products especially would find it to their advantage to install medical inspection, both for its direct and for its advertising value

Principal Causes of Death

The Bureau of the Census has just issued a bulletin of the principal causes of death in the registration area in 1914 More than 30 per cent of the 898,059 deaths reported from the registration area, which contains about two thirds of the population of the United States, were due to three causes heart disease tuberculosis and pneumonia More than 60 per cent of the total number of deaths were due to eleven causes In addition to the three named they were acute and chronic nephritis, cancer, diarrhea and enteritis, apoplexy, arterial diseases, diphtheria, diabetes and typhoid fever The deaths from heart disease numbered 99,534, or 150.8 per hundred thousand of population This is an increase over the rate of 1900, when it was only 123 1 The number of deaths from tuberculosis was 96,903, of which 84,366 were lung cases including acute miliary tuberculosis In the period from 1904 to 1914 the death rate from tuberculosis in all its forms fell from 200.7 to 146 8 per hundred thousand, the decline being continuous from year to year a decrease of more than 25 per cent. Pneumonia, including bronchial pneumonia, was responsible for 83 804 deaths in the registration area, or 127 per hundred thousand, the lowest rate on record Pneumonia like tuberculosis, has also shown a decline since 1900 when it was 180.5 per hundred thousand Acute and chronic nephritis had a death rate of 102 4 per hundred thousand, and is the only disease other than those named having a rate above 100 The total number of deaths [illegible]7,545, an increase from 89 per hundred thousand in 1900

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to 103 4 in 1905 Cancer and other malignant growths caused 52,420 deaths, 19,889, or almost 38 per cent, were the result of cancer of the stomach and liver The rate for cancer has risen from 63 per hundred thousand in 1900 to 79 4 in 1914 Only two years during this time showed a decline as compared with the years immediately preceding, the increase having been almost constant Apoplexy showed 51,272 deaths, or 77 7 per hundred thousand The rate for apoplexy has also gradually increased, with only occasional slight declines since 1900, when it was 67 5 Arterial diseases caused 15,044 deaths, or 22 8 per hundred thousand It is said that no epidemic disease produced a death rate as high as 18 per hundred thousand in 1914 A notable decrease in these diseases was that for diphtheria In 1914 the deaths numbered 11,786, or 17 9 per hundred thousand, a fall from 43 3 in 1900, representing a decline of nearly 59 per cent Diabetes caused 10,666 deaths, a rate of 16.2, in 1900 it was 9 7 Typhoid fever declined since 1900 from 35 9 to 15 4, a fall of 57 per cent The epidemic maladies of childhood, whooping cough, measles and scarlet fever, caused 15,617 deaths, of both adults and children, or 23 7 per hundred thousand In 1913 measles led in the death rate of these three diseases, but in 1914 whooping cough had first place In every year since 1910 measles has caused more deaths than scarlet fever Interesting figures are also shown in regard to railway and street car accidents Railway accidents and injuries totaled 7,062 or 10 7 per hundred thousand This includes deaths from collision between railway trains and vehicles at grade crossings These figures are said to be the lowest on record Street car accidents and injuries numbered 1,673, or 2 5 This is likewise the lowest on record for this character of accidents There were 10,933 suicides, or 16 6 per hundred thousand

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Public Health Threatened

The public health committee of the New York Academy of Medicine protests very properly against the monstrous resolution lately introduced in Congress by Senator Works of California for no imaginable purpose except to injure or discredit the endeavors of the United States Public Health Service If Senator Works were to have his way no officer or other person in this service would be permitted to join or be associated in any manner whatever with any public or private medical or scientific society

A more preposterous and absurd proposal was never laid before a body of legislators for serious consideration If the object is to separate the members of the Public Health Service from all others concerned in similar or kindred efforts it is rightly conceived, and, indeed, considering the whimsical views of the senator and his woeful ignorance of the problems of public health, it is clear that that is precisely what he aims at, his supposition being that the *American Medical Association* and all associations of scientific men are essentially evil

No one who has ever heard or read the vain and extravagant rhapsodies of Senator Works is likely to mistake him for a thinker or one competent either by nature or training to form a reasoned opinion on public health, but there is some danger that he may impart to others who do not take the trouble to think for themselves some tincture of his own suspicion that the great medical societies are engaged in a conspiracy to control the administration of public health for their own profit

Even the densest must see, however, that in an enterprise of this kind it is of essential importance that the officers of the government should be in close touch with those engaged in medical work throughout the country, and that nothing could be better calculated to paralyze the central body than to forbid association with learned bodies elsewhere Without the cooperation of all concerned in work of this nature, the United States Public Health Service would be useless and might as well be abolished outright Such an event would probably gratify Senator Works, but it may be hoped that few share his unenlightened conception of the matter —New York *Tribune*, May 16, 1916

Society Proceedings

ASSOCIATION OF AMERICAN PHYSICIANS

Thirty Fourth Annual Meeting held at Washington, D C, May 9 11, 1916

(Concluded from page 1886)

Blood Sugar Estimations as a Test of Carbohydrate Tolerance

Dr Louis V Hamman, Baltimore Frequent examinations of the blood and urine after the administration of glucose to fasting persons reveal four types of reaction 1 Normal reaction The blood sugar rises rapidly to a level not exceeding 0 15 per cent From this point it again rapidly declines, the whole reaction being over in less than two hours 2 Diabetic reaction The blood sugar rises more slowly, but reaches a higher point, 0.2 per cent and over The high point is maintained for some time, and the decline occurs gradually, the whole reaction occupying three hours or longer If the blood sugar rises above 0 175 per cent., sugar appears in the urine 3 Renal reaction In a small number of persons, although the blood sugar curve is in all other respects like the normal reaction, still sugar appears in the urine In severe cases of diabetes the same low renal threshold is often found 4 Nephritic reaction In many cases of nephritis the blood sugar rises to a high level, often exceeding 0.2 per cent, and the blood sugar curve resembles the diabetic reaction, however, no sugar, or only a trace of sugar, appears in the urine. Studies of the blood sugar reaction after the administration of glucose and its relation to glycosuria give valuable clinical data in diabetes and other conditions

Experimental Endocarditis Its Production with Streptococcus Viridans of Low Virulence

Drs H K Detweiler and W L Robinson, Toronto The cultures of *Streptococcus viridans* obtained from the blood in cases of chronic endocarditis were injected intravenously into a series of rabbits, and endocarditis was produced in a large number of cases The necropsy findings led us to believe that this organism has a special affinity for the heart valves The *Streptococcus viridans* obtained from the normal mouth is equally productive of heart lesions, and any grade of endocarditis may be produced by any one organism, depending on the amount injected, the number of injections, and the length of time between the first injection and the death of the animal

Starvation Treatment of Diabetes

Drs C F Martin and E H Mason, Montreal Observations of the metabolism in a number of cases of diabetes treated by the starvation method illustrate the speed with which one may arrive at the tolerance for various foodstuffs by this method, and also that hyperglycemia is a much better criterion of the dietetic needs than is the glycosuria Starvation, too, affects acidosis in different ways In diabetes it was found that the blood sugar curves, with the glucose test, differ constantly from those of the normal individual

DISCUSSION

Dr Abraham Jacobi, New York The starvation treatment of diabetes is very satisfactory to the experimental doctor, but what happens to the patient? I have seen patients with 5 or 6 per cent of sugar go along in satisfactory health for five or ten or even twenty years I have also seen starved patients, emaciated, suffering with cerebral anemia, complaining bitterly of other symptoms of nerve exhaustion, and now they are dead They would not be dead if they had not been starved Are not those living patients with glucose in the urine better off than those who died?

Dr S J Meltzer, New York I know of several persons who would have lived comfortably with glucose in the urine, but who were starved, developed acidosis, which was not discovered early, and died But they need not have died if the acidosis had been discovered The starvation treatment ought not to be used indiscriminately, but only when the physician is on the alert for the first signs of acidosis At any rate, it does not do to use the words "acidosis" and "dying" as synonymous.

Dr. J. Van Slyke, New York: The diabetic cases treated at the Rockefeller Institute are watched very carefully; some do well in acidosis, others much worse. If acidosis develops in the first fast it may not occur in the second. But the fast is always broken as soon as acidosis is observed.

Dr. M. Howard Fussell, Philadelphia: I have used the starvation treatment in a number of cases during the past year and not all of the patients were treated in hospitals, though all have done extremely well. Some have had severe acidosis, but all came out satisfactorily and all are now as comfortable as possible.

Dr. C. F. Martin, Montreal: I am sorry that Dr. Jacobi got the idea that I actually starved my patients; as a matter of fact they are not even hungry; they are not fasted to that extent.

Gastrohydrorrhea in Cirrhosis of the Liver Accompanied by Pyloric Stenosis

Dr. Max Einhorn, New York: A flow to the amount of from 1 to 1½ quarts a day was encountered in a patient suffering from cirrhosis of the liver accompanied by pyloric stenosis. No ascites had developed. At necropsy a typical cirrhotic liver and a pyloric tumor (cancerous) were found. The gastrohydrorrhea is explaind by a transudation process relieving the venous congestion in the stomach and is akin to an accumulation of ascitic fluid from the intestines in cirrhosis of the liver without pyloric obstruction.

DISCUSSION

Dr. H. A. Christian, Boston: I have observed a similar condition in cirrhosis patients both with and without ascites. I have always believed it to be a compensatory process.

Dr. Max Einhorn, New York: I have no doubt that the copious morning vomiting seen in many cases of cirrhosis and of cancer of the liver is due to failure of the portal circulation.

Effect of Exposure to Cold on Experimental Infection of the Respiratory Tract

Drs. James Alexander Miller and Willis C. Noble, New York: Our experiments were carried out with rabbits inoculated with *Bacillus bovisepticus*, an organism which causes the laboratory disease in rabbits known as "snuffles." It was selected for experiment because it produces in rabbits conditions very similar to those in respiratory infections in man and because of the relative difficulty of producing pneumococcus pneumonia in rabbits. The animals were kept in a warm temperature for varying periods of time and were then inoculated by spraying the nose and throat with virulent cultures of the "snuffles" bacillus. They were then immediately chilled by exposing them to cold weather. Two series of experiments in two successive winters were carried out. The totals for the two series show that of thirty-seven experimental animals, fifteen, or 40.5 per cent., reacted to the infection while of an equal number of controls, nine, or 24.3 per cent., reacted. The conclusion seems justified that exposure to cold after previous subjection to warm temperatures rendered rabbits somewhat more liable to infection with *B. bovisepticus*.

DISCUSSION

Dr. Henry Sewall, Denver: Throughout life we are constantly receiving antigens which protect us if we are in training and sensitize us if we let down the bars of hygienic indiscretions.

Dr. S. J. Meltzer, New York: Experiments seeking to show the relations between exposure to cold and lung infection must all fail for the present because the lungs are always maintained at the same temperature. But the same cannot be said of the nose and larynx; exposure to cold does cause a reaction in these parts and we begin to sneeze or cough. These symptoms are not diseases, however; they are efforts of the body to get rid of undesirable substances. While these effects of exposure do not cause disease, they undoubtedly open the way to disease. The only way to prove the matter so far as the lungs or bronchi are concerned would require the introduction of hot or cold air through a tube to the lung or bronchus where organisms had previously been placed. This would not afford complete evidence, however.

The Expectorant Action of Ammonium Chlorid

Dr. Warren Coleman, New York: Observations were made on the expectoration in bronchitis before and after administration of ammonium chlorid. The sputum was subjected to chemical examination which showed a large increase of ammonia nitrogen in sputum after the exhibition of ammonium chlorid. I took ½ grain doses of ammonium chlorid every two hours during the day (up to 7 p. m.). A distinct taste of the drug was perceptible in the sputum the next morning but not in the saliva. Another subjective observation was that the sense of bronchial rawness and tightness in bronchitis was relieved in half an hour after taking ammonium chlorid. The explanation of this effect probably lies in the water carriage of the drug when excreted by the bronchial mucosa, the mucous membrane and secretion being softened thereby.

DISCUSSION

Dr. Abraham Jacobi, New York: Ammonium chlorid will do something in chronic bronchitis in which the sputum is sticky and hard to raise.

Dr. S. J. Meltzer, New York: Dr. Coleman's interesting experiments do not decide the questions surrounding the expectorant action of ammonium chlorid. First, we should want a definition of expectorants; Dr. Coleman indicates that there are two kinds: secretion increasers and secretion removal helpers. The observation that a given substance is absent from a secretion is not evidence that the substance had no effect on the secretion; it may have done something in the blood. Physicians should not give up something that good clinical observers have found useful on the basis of mere experimental evidence. My observations for many years have been that ammonium chlorid does good in a "cold." It will not save a patient destined to die, but it is a good palliative remedy.

Dr. Joseph Erlanger, St. Louis: One could not be positive that the ammonium chlorid found in the sputum was excreted with it. What precautions were taken to see that no ammonium chlorid was retained in the mouth? Was any ammonium chlorid eliminated in the saliva?

Dr. L. G. Rowntree, Minneapolis: At what stage in acute bronchitis does Dr. Coleman believe ammonium chlorid is indicated? Is its action central or peripheral?

Dr. Warren Coleman, New York: Careful examinations of both sputum and saliva were made. Only a very slight ammonia reaction was found in the saliva. As to the stage of bronchitis in which ammonium chlorid is indicated, benefit may be expected after the first few doses given as soon as the first dry rawness in the bronchi appears. The effect of the drug is probably due to its elimination by the bronchial mucosa, the water carried with it softening the secretion.

Coagulation Time in Lobar Pneumonia

Dr. J. M. Anders and George H. Meeker, Philadelphia: The so-called Boggs test was employed, the blood obtained by free puncture of finger tip or ear lobe. It was found that in pneumonia coagulation time is slightly shortened, the mean time being nearly two minutes. As to the cause of the shortened coagulation time in pneumonia, there is no definite evidence. It occurred to us that the rapid destruction of leukocytes in the exudate might set free much enzyme and so set up the process. Calcium is not increased in pneumonia and therefore has no effect on the change in coagulation time.

DISCUSSION

Dr. S. J. Meltzer, New York: In similar experiments I observed no increase of calcium in nonvirulent pneumonia, but there is an increase of this element in experimental virulent pneumonia. Starch pneumonia is not attended with fibrin increase.

Dr. Rufus I. Cole, New York: Douchez found that in blood obtained direct from the vein in pneumonia the fibrinogen is increased, but the coagulation time is prolonged.

Action of Certain Diuretics in Chronic Nephritis

Dr H A Christian, Boston The effects of theocin (as representing diuretics) were varying there may be an increase or decrease of diuresis, of salt, of nitrogen, but sodium chlorid is more often increased than nitrogen, and tends to parallel water excretion The conclusion seems justified that theocin causes an inconstant and not marked effect in acute nephritis in man In chronic nephritis and chronic cardiorenal disease, theocin produces diuresis in inverse ratio to renal function When diuresis is induced, it is followed by reduced renal functions, suggesting the advisability of intermittent use of diuretics The fact that there may be diuresis without increase of nitrogen output makes questionable the use of diuretics for detoxicating purposes In many cases with severe nephritis, diuretics are probably harmful, being followed by no diuresis, no increase of urinary ingredients, and by diminution of renal function

DISCUSSION

Dr W S Thayer, Baltimore I have noted the beneficial effect of diuretics in cardiac disease, and also the danger of the continuous use of diuretics in severe renal disease

Dr J M Anders, Philadelphia I have relied on saline diuretics We should not employ diuretics unless the phenolsulphonephthalein test shows good functional capacity To aid elimination we have been used to giving large drafts of water, was this taken into consideration in the studies?

Dr L G Rowntree, Minneapolis Were there any observations on water alone as a diuretic?

Dr Henry A Christian, Boston The value of the phenolsulphonephthalein test will depend on whether a low output is due to chronic passive congestion or to tubular insufficiency The influence of water was not studied, however, all of the patients were on a constant fluid intake Water acts like other diuretics in shortening the lives of experimental nephritic animals

Toxic Effects of Urea on Normal Individuals

Drs A W Hewlett, Q O Gilbert, and A D Wickett, Ann Arbor, Mich In order to study the toxic effects of urea on man, about 100 gm of urea were taken by mouth within a few hours When the concentration of urea in the blood exceeded 160 mg per hundred c c of blood, the subject usually complained of headache, dizziness, drowsiness, mental apathy, inability to concentrate the attention, muscular weakness and fatigue and slight muscular tremor These symptoms are similar to those described in the asthenic types of uremia in which the blood urea approaches and often exceeds the threshold of symptoms observed in these experiments It is probable, therefore, that in this type of uremia many of the symptoms can be attributed to the high concentration of urea in the body In these experiments no nausea or loss of appetite occurred at the maximum level of urea in the blood, nor was there any marked rise of blood pressure

DISCUSSION

Dr Warren Coleman, New York An instructive case was that of a girl, aged 13 years, who came to hospital in uremic convulsions Blood taken for therapeutic purposes yielded of noncoagulable nitrogen a total of 20 mg per hundred c c In later convulsions other observations never found the noncoagulable nitrogen above 30 mg per hundred c c of blood It is evident that in some cases urea is not a factor in the convulsions

Dr Henry A Christian, Boston Dr Hewlett's observations coincide with my own on the noneffect of diuretics on the removal of nitrogen, and of their failure to influence the symptoms of uremia It is necessary to consider both blood accumulation of nitrogen and kidney excretion of nitrogen in these problems, storage is the factor rather than the amount in the blood How long did it take for the level of blood urea to return to normal?

Dr Charles S Bond, Richmond, Ind Did diuresis follow the ingestion of the urea, and how much water was taken during the experiments?

Dr A W Hewlett, Ann Arbor, Mich It is necessary to keep in mind that more substances are concerned in uremia than urea The time of the return of the urea level of the blood to normal was not ascertained, the observations were not continued long enough, the threshold of symptom production was passed on the down wave in six hours Tissues were studied, and showed that tissue concentration of urea was equal to that of the blood There was an enormous diuresis, shown to be independent of water intake in two cases

Factors in Normal Blood Destruction

Drs Peyton Rous and O H Robertson, New York Phagocytosis is not sufficient to account for blood destruction in man There is a gradual disintegration of red blood cells, with removal in the liver

The Metabolism and Treatment of Rheumatoid Arthritis

Dr Ralph Pemberton, Philadelphia Fifty cases of rheumatoid arthritis were treated by curtailment of carbohydrates, with subsidence of symptoms and with exacerbations following renewed carbohydrate feeding The restriction in diet may regulate the symptoms, whether or not focal infections are present The diet may be supplemented by protein to the necessary requirement, and the caloric requirement brought to normal by butter and olive oil There is a tendency of the urine to swing to alkaline with exacerbations of the disease

Vital Capacity of the Lungs, and Its Relation to Dyspnea in Heart Disease

Drs Francis W Peabody and John A Wentworth, Boston The production of dyspnea in patients with heart disease depends, in part, at least, on inability to increase the minute-volume of air breathed to as great an extent as can normal persons This is due to a decrease in the vital capacity which limits the depth of breathing The tendency of a patient to become dyspneic on exertion varies closely with the degree of the decrease in vital capacity The determination of the vital capacity gives an indication of the amount of exercise which will produce dyspnea, and is a guide to the severity of the functional disability of the case

Action of Opium Alkaloids and Their Combinations on the Vomiting Center

Dr David I Macht, Baltimore Nausea and vomiting are the most annoying symptoms produced by opium and its derivatives In a study of the seven principal alkaloids of opium, it was found that they could be divided into two groups (1) morphin, which causes vomiting, (2) all the others, which produce nausea feebly The minimal dose of morphin which produces vomiting in the dog was found to be (average) from 0 3 to 0 4 mg per kilogram of body weight Not only is vomiting produced by morphin, but the drug puts the vomiting center out of commission, no vomiting is induced thereafter by apomorphin Morphin and narcotin given together produced less vomiting than smaller doses of morphin alone, moreover, the combination did not produce exhaustion of the vomiting center, the same holds true for morphin in combination with narcein, and even more remarkable effects are seen when a mixture of the total alkaloids is given, the vomiting center is not put out of commission by this preparation The explanation of its favorable action probably lies in the molecular structure of the alkaloids The combination of opposites reduces the tendency to provoke nausea

Rôle of the Liver in Acute Polycythemia

Dr Paul D Lamson, New York As to the cause of the sudden increase of red cells in acute polycythemia, two theories are held (1) that polycythemia is due to sudden diminution of blood fluid with concentration of cells, and (2) that there is a sedimentation of red cells somewhere in the body, which if stirred up will suddenly increase the red cell count Epinephrin will cause a polycythemia in a few minutes, this reaches its height in fifteen minutes, and begins to fall in another fifteen minutes Experiments were made to fix the liver as the source of the influx of cells It appears that the increase of cells is not due to loss of plasma alone, but also to a sudden influx of stored cells The liver seems to be the organ that is responsible for both factors It is suggested that a physiologic influx of epinephrin may account for acute polycythemia, such as occurs after fright, etc

(Continued on page 2030)

Marriages

Lloyd Warren Ketron, M.D., Baltimore, to Miss Romola Cressey of Modesto, Calif., at Baltimore, May 21.

Walter Edwin Koppenbrink, M.D., St. Louis, to Miss Alice Miriam Lake of Higginsville, Mo., May 24.

Richard Ormond Leavenworth, M.D., Glencoe, Minn., to Miss Geneva M. Hilton of Minneapolis, June 14.

Raymond Clare Coleman, M.D., Estherville, Iowa, to Miss Josephine Dean Smith of Minneapolis, May 24.

Elmer Stanley Bagnall, M.D., Roslindale, Mass., to Miss Aida H. Salmon of Boonton, N. J., June 3.

George Edwin Deering, M.D., to Miss Agatha Louise Small, both of Worcester, Mass., recently.

Abraham Snell Park, M.D., Chicago, to Miss Laura Isabel Davidson of Owatonna, Minn., June 7.

Francis Gilman Blake, M.D., Boston, to Miss Dorothy Dewey of Springfield, Mass., June 1.

William Nelson Thomas, M.D., Oxford, N. C., to Miss Estelle Bullock, at Oxford, June 1.

Warren Yoder Thompson, M.D., to Miss Mary G. Kenworthy, both of Omaha, May 24.

Cary Eggleston, M.D., to Miss May Appleton Parker, both of New York City, June 3.

Walter Joseph Ream, M.D., Ladd, Ill., to Miss Marie Hall of St. Paul, June 1.

Deaths

Ambrose Talbot, M.D., Kansas City, Mo., Harvard Medical School, 1885, aged 55, a Fellow of the American Medical Association, visiting physician to St. Margaret's Hospital, Kansas City, Kan., medical director of the Kansas City Life Insurance Company and medical referee of the National Life Insurance Company of New York, instructor in clinical medicine in the medical department of the University of Kansas, once president of the Medical Section of the American Life Convention, died in his office in Kansas City, June 1, from cerebral hemorrhage.

Edward Orlando Greer, M.D., St. Louis; Marion-Sims College of Medicine, St. Louis, 1893, aged 50, formerly a Fellow of the American Medical Association, a member of the Missouri State Medical Association, from 1907 to 1911 professor of hydrotherapy and diseases of the abdominal viscera in Barnes Medical College, St. Louis, and for a year thereafter professor of clinical medicine in the National University of Arts and Sciences, St. Louis, formerly chief of the obstetric and gynecologic clinics in his alma mater, died at his home, May 27, from nephritis.

Andrew M. Peables, M.D., Auburn, Me.; Dartmouth Medical School, Hanover, N. H., 1864, aged 80, a Fellow of the American Medical Association and vice president of the Androscoggin County Medical Association, attending physician to the Central Maine General Hospital, of which he was one of the founders, a member of the Auburn School Board and city council, and a representative in the state legislature in 1869 and 1870, president of the board of health of Auburn, a director in two local banks, died at his home, May 24.

Francis Foerster, M.D., New York City; College of Physicians and Surgeons in the City of New York, 1883, aged 61, a Fellow of the American Medical Association and New York Academy of Medicine and of the American College of Surgeons; for ten years professor of gynecology in the New York Post-Graduate School; obstetrician and gynecologist to the German Hospital; died in that institution, June 1, after a long illness from abscess of the lung.

Edwin Alonzo Goodridge, M.D., Flushing, L. I., N. Y.; College of Physicians and Surgeons in the City of New York, 1871, aged 75, for thirty-four years a practitioner of Flushing, for five years president of the board of education and for many years trustee of the public schools, a veteran of the Civil War; at one time health officer of Flushing and surgeon to the Flushing Hospital, died at his home, May 31, from heart disease.

Thomas Elwin Murray, M.D., Great Falls, Mont.; Jefferson Medical College, 1908, aged 34, a member of the Medical Association of Montana, a registered pharmacist, health officer of Great Falls and vice president of the State Life Insurance Company of that city, who was operated on in April for relief of chronic appendicitis, died in St. Joseph's Hospital, Phoenix, Ariz., May 29, from endocarditis.

James Stenhouse, M.D., Denver; Denver College of Medicine, 1886, aged 56, head physician of the Pacific jurisdiction of the Woodmen of the World, visiting physician to the Denver City and County Hospital, founder of the People's Mission, Denver, formerly local surgeon for the Denver and Rio Grande and Union Pacific systems, died in St. Joseph's Hospital, Denver, May 24, from pneumonia.

John Evelyn Page, M.D., Santa Barbara, Calif.; University of Maryland, Baltimore, 1889, aged 49, surgeon (lieutenant-commander), U. S. Navy (retired), who entered the Navy June 18, 1890, and was retired on account of incapacity resulting from an incident of service, April 3, 1908, after seven years and eleven months' sea service and six years and eight months' shore or other duty; died May 28.

Albert Curtis Perveil, M.D., Brooklyn; New York University, New York City, 1894, aged 40, for two years surgeon of the Offin River Gold Mining Company in the Belgian Congo, West Africa, and who had been ill with sleeping sickness at his home in Brooklyn for several months, died in Roosevelt Hospital, New York City, May 31, from trypanosomiasis.

Walter John Wilson, M.D., Detroit; Detroit Medical College, 1879, aged 67, a Fellow of the American Medical Association and at one time president of the Detroit Academy of Medicine, while riding a motorcycle in Detroit, June 1, was struck by a street car and sustained a fracture of the skull from which he died in the Receiving Hospital, two hours later.

James Ferguson Vannice, Bishop Hill, Ill. (license, years of practice, Illinois, 1889), aged 76, a member of the Illinois State Medical Society, formerly a druggist, a veteran of the Civil War and a practitioner since 1867, for many years school director and clerk of the board of education of Bishop Hill; died at his home, May 25, from cerebral hemorrhage.

Charles Zeh Garside, M.D., New York City; College of Physicians and Surgeons in the City of New York, 1903, aged 37, a member of the New York Academy of Medicine, and New York Pathological Society, professor of pathology and bacteriology in Fordham University, New York City, died in the German Hospital, New York City, June 1.

Benjamin U. Jacob, M.D., Waukesha, Wis.; Northwestern University Medical School, Chicago, 1881, aged 66, formerly a Fellow of the American Medical Association, a member of the State Medical Society of Wisconsin, formerly a druggist, and physician to the Wisconsin State Industrial School for Boys, died at his home, May 28, from heart disease.

Alfred King, M.D., Portland, Me.; Medical School of Maine, Brunswick, 1886, aged 54, a Fellow of the American Medical Association and a member of the American Surgical Association, professor of surgery in his alma mater and consulting surgeon to the Maine General Hospital, Portland, died at his home, June 4, from pneumonia.

Moise Lafleur, M.D., New Orleans; Tulane University, New Orleans, 1915, aged 27, ship surgeon on the United Fruit Company's steamer *Suriname,* while engaged in scientific research work on the border between Guatemala and British Honduras, was shot and killed by Guatemalan soldiers.

Edward White Elliott, M.D., Turlock, Calif.; College of Physicians and Surgeons, Keokuk, Iowa, 1897, aged 49, formerly a Fellow of the American Medical Association, a member of the Medical Society of the State of California, died at his home, May 26, from cerebral hemorrhage.

Matta Louisa Berry Longwell, M.D., Wellsboro, Pa.; Woman's Medical College of Pennsylvania, Philadelphia, 1905, aged 36, a Fellow of the American Medical Association, died in the Williamsport Hospital, June 3, from acute nephritis three days after an operation for appendicitis.

Louis F. Laudick, M.D., Lima, Ohio; Medical College of Ohio, Cincinnati, 1890, aged 49, formerly a Fellow of the American Medical Association, a member of the Ohio State Medical Association; at one time health officer of Lima, died in a hospital in Toledo, May 25, from paresis.

M. H. Verpoorten, M.D., Council Bluffs, Iowa; Catholic University, Louvain, Belgium, 1874, aged 68, a Fellow of the American Medical Association, for several years a practitioner and druggist of Laramie, Wyo., died in the Jennie Edmundson Hospital, Council Bluffs, June 2.

William Pitt Cleveland, M D, Fargo, N D, Medical School of Maine, Brunswick, 1879, aged 67, said to have been the first registered medical practitioner in Dakota territory, formerly physician of Caledonia and Traill County, N D, died at his home, May 30

Francis M Rose, M D, Los Angeles, formerly of Faribault, Minn, Starling Medical College, Columbus, Ohio, 1860, aged 74, formerly a Fellow of the American Medical Association, a veteran of the Civil War, died at his home, May 18, from paralysis

David C Stinson, M D, Sioux City, Iowa, College of Physicians and Surgeons, Keokuk, Iowa, 1874, aged 66, for thirty-two years a practitioner and druggist of Dakota County, Neb, died at his home in Sioux City, Iowa, May 25, from malignant disease

Thomas Perrin Kennedy, M D, Union, S C, Tulane University, New Orleans, 1910, aged 30, a member of the South Carolina Medical Association, a specialist on diseases of the eye, ear, nose and throat, died at the home of his father-in-law in Union, May 21

Chapman J French, M D, Huntington, W Va, University of the South, Sewanee, Tenn, 1904, aged about 40, a member of the West Virginia State Medical Association, died suddenly at a hotel in Kenova, W Va, May 31, from cerebral hemorrhage

Thomas J Partlow, M D, Newport News, Va, Medical College of Virginia, Richmond, 1906, aged 33, a Fellow of the American Medical Association, for three terms city health officer of Newport News, died at his home, June 1, from cerebral hemorrhage

Charles Turner Sands, M D, Las Cruces, N M, Jefferson Medical College, 1907, aged 33, a Fellow of the American Medical Association, formerly of Pittsburgh, who went to New Mexico six years ago on account of his health, died at his home, May 14

James S Hanson, M D, Sandusky, Ohio, Detroit College of Medicine and Surgery, 1891, aged 47, a member of the staff of Providence Hospital, Sandusky, a director of the Columbus Mutual Life Insurance Company, died at his home, May 31

George Morris Eckels, M D, Mechanicsburg, Pa, University of Pennsylvania, Philadelphia, 1885, aged 59, a member of the state legislature from Cumberland County in 1891 and 1893, a member of the borough council, died at his home, May 24

Thomas Hamlin Strohecker, M D, Washington, D C, North Carolina Medical College, Charlotte, 1902, aged 63, also a lawyer and clergyman of the Lutheran Church, died in George Washington University Hospital, Washington, D C, June 1

Maurice J Carey, M D, Cleveland, Columbus (Ohio) Medical College, 1882, aged 71, formerly a Fellow of the American Medical Association, a member of the Ohio State Medical Association, died at his home, April 17, from pneumonia

Paul Archibald Gillespie, M D, Winburg, South Africa, University of Toronto, Ont, 1891, formerly of Cannington, Ont, major in the South African Expeditionary Force for some time, died at Winburg, March 24, from bubonic plague

James Stimson, M D, Santa Cruz, Calif, New York University, New York City, 1854, Victoria University, Coburg, Ont, 1855, aged 83, president of the Santa Cruz County Medical Association in 1892, died at his home, May 25

James J Gibson, M D, Athens, R D 11, Lexington, Ky, Hospital College of Medicine, Louisville, Ky, 1889, aged 47, a Fellow of the American Medical Association, died at his home near Athens, May 28, from cerebral hemorrhage

Thomas E Bales, McMinnville, Tenn (license, Tennessee, 1889), aged 54, a Fellow of the American Medical Association, for many years a practitioner of Morristown, Tenn, died at his home, May 24, from pernicious anemia

William Ross Lee, M D, Los Angeles, New York University, New York City, 1890, aged 53, died in the receiving hospital, Los Angeles, May 20, from the effects of morphin, self-administered, it is believed, with suicidal intent

Matthew John Perkins, M D, Spearville, Kan, Trinity Medical College, Toronto, 1903, aged 43, a member of the Kansas Medical Society, founder of the Perkins' Hospital, Spearville, died at his home in that place, June 3

Haakon B Christensen, M D, Los Angeles, University of Denmark, Copenhagen, 1894, aged 35, was accidentally drowned at Venice, Calif, February 27

Leonard G Hain, M D, Shillington, Pa, Jefferson Medical College, 1893, aged 43, coroner of Berks County, also a banker, died in St Joseph's Hospital, Reading, Pa, May 23, after an operation for appendicitis

Samuel P Coffman, M D, Sugar Grove, Ky, Louisville (Ky) Medical College, 1886, aged 58, a member of the Kentucky State Medical Association, died at his home, February 19, from disease of the kidney

Ellet Joseph Wagner, M D, Battle Creek, Mich, Long Island College, Brooklyn, 1878, aged 60, physiologic chemist to the Battle Creek Sanitarium, died in that institution, May 28, from heart disease

Joseph Riddle Gorrell, M D, Newton, Iowa, University of Buffalo, N Y, 1859, aged 79, surgeon of U S Volunteers during the Civil War, died at the home of his daughter in Newton, about May 26

Elizabeth Jane Wiley Corbett, M D, New York City, formerly of San Francisco, University of Michigan, Ann Arbor, 1879, aged 82, died at the Takoma Park Sanitarium, Washington, D C, June 4

Almon L Bennett, M D, Nickerson, Kan, formerly of Greensburg, Kan, Eclectic Medical Institute, Cincinnati, 1889, aged 65, died at his home in Nickerson, April 24, from cerebral hemorrhage

Edwin Wilbur Higbee, M D, Northampton, Mass, University of Vermont, Burlington, 1871, aged 66, for more than forty years a practitioner of Northampton, Mass, died at his home, May 21

Douglas Waterston, M D, Westmount, Montreal, Que, McGill University, Montreal, 1914, aged 26, captain in the Canadian Army Medical Corps, was killed in action in France, May 22

Edward John Ulrich, M D, San Jose, Calif, Homeopathic Hospital College, Cleveland, 1871, aged 83, for several years a clergyman of the Methodist Episcopal Church, died at his home, May 31

Philip Henry Edwards, M D, Newark, N J, New York University, New York City, 1895, aged 43, a member of the Medical Society of New Jersey, died at his home, May 26, from peritonitis

Arthur Scott Reebel, M D, Saranac Lake, N Y, formerly of Youngstown, Ohio, Tufts College Medical School, Boston, 1909, aged 30, died at the home of his parents in Youngstown, May 22

James Turner Sherman, M D, Dorchester, Boston, New York Homeopathic Medical College, 1869, aged 67, died at the home of his daughter in Newport, R I, June 6, from pneumonia

George C Werner, M D, Norwood, Cincinnati, University of Freiburg, Germany, 1888, aged 72, a veteran of the Franco-Prussian War, died at his home, May 31, from heart disease

George Henry Carpenter, M D, Cumberland, Md, University of Maryland, Baltimore, 1868, aged 73, died in the Allegany Hospital of the Sisters of Charity, Cumberland, May 24

Otis Lee Wingate, M D, Albuquerque, N M, formerly of Philadelphia, Jefferson Medical College, 1904, aged 38, died recently at his home in Philadelphia, from tuberculosis

John Luther Duryee, M D, Newark, N J, College of Physicians and Surgeons in the City of New York, 1868, aged 70, died in a sanatorium in Orange, N J, June 1

Fletcher Smith, Dover, Ky (license, Kentucky State Board of Health, forty-one years of practice, 1893), aged 92, died at his home, May 18, from senile debility

Edmund P Thomas, M D, Bowling Green, Ohio, Hahnemann Medical College, Chicago, 1882, aged 62, died at his home, May 18, from erysipelas

Carlton S Shepard, M D, Omaha, Rush Medical College, 1881, aged 64, was killed in an automobile accident near Red Willow, Alta, May 24

Charles Jefferson Stovall, M D, Bowling Green, Ky, Kentucky School of Medicine, Louisville, 1891, aged 61, died at his home, May 25

James Francis Costello, M D, Wollaston, Mass, Tufts College Medical School, Boston, 1913, aged 26, died at his home, May 23

Arthur E Dawson, M D, Jersey, Tenn, Chattanooga (Tenn) Medical College, 1904, aged 36, died at his home, May 24

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

THE WINE OF CARDUI SUIT

(*Continued from page 1879*)

May 9, 1916, Afternoon

TESTIMONY OF DR T SOLLMANN (*continued*)

The Court met pursuant to adjournment Dr Torald Sollmann resumed the stand for the defendants

DIRECT EXAMINATION BY MR T J SCOFIELD (*continued*)

VALUE OF ANIMAL EXPERIMENTATION

Q—Doctor you stated that a second method of the investigation of preparations such as Wine of Cardui is by animal experimentation Now will you please explain to the jury what you mean by that and what the value of animal experimentation is in such an investigation? *A*—Experiments on the animals enable one to—

Q—Doctor may I interrupt you just a moment to warn you to keep your voice up so that we can all hear *A*—Experiments on animals enable one to obtain definite information by methods that can be exactly controlled and that are not open to the same sources of error as are clinical experiments or clinical observations Whilst of course the clinical test is the final test of the value of a medicine itself in order to be safe it has to be supplemented—or better preceded by experiments on animals that avoid as I say the errors that are very difficult to avoid in clinical experimentation—or clinical observation.

Q—Now doctor can you illustrate this to the jury in any way? *A*—Yes In the scientific subjects one is only applying the same sort of reasoning of course that one applies in ordinary life. The field of that reasoning is a little different but that is the only difference. The same sort of reasoning applies in the scientific fields of investigation as it does in every day affairs

Now one example that occurs to me in this connection that illustrates very well the difference between the laboratory test and the clinical test, is the way in which the germinating quality of the seed corn can be tested If a farmer buys some seed corn and sows it out in the field and the corn comes up and he cultivates it and he harvests the crop of course he knows that was corn that was sufficiently good—the seed was sufficiently good

That is one way of testing the quality of the corn. And it is rather a wasteful way and it takes a long time and it is not absolutely certain because, if the corn should not come up it might not be the fault of the seed at all the weather might be bad it might have rotted in the ground or some animals might have eaten it up almost anything might have happened.

So that whilst to a certain extent under certain circumstances, that field test which corresponds to the clinical test is a good test under other conditions it is not.

Now there is another way in which the quality of the seed can be tested, and that is to put it on a plate with a little water behind a stove and see after two or three days, whether it has sprouted Now that corresponds to the laboratory test. You are subjecting this corn to rather artificial conditions and not exactly the conditions under which you are going to use it in the field, but simpler conditions conditions that you can control.

If you are doing the test on the plate in the first place you know definitely whether that seed is a good germinating seed or not. If it has not germinated there it would not be the fault of any crows or any bad weather—it was the fault of the seed and nothing else.

Then again the test is very much quicker You don t have to sow it in the field and if it does not come up lose your whole season s work It can be done inside of a very few days Why? Because the conditions for the test are so much more favorable than they are in the field test. Therefore if you are wise you will make that test first, if you have any doubts as to the quality of that seed if you bought it promiscuously—you will first make the seed test before you put it in the field.

Now that is exactly the case with the laboratory experiments The laboratory experiments bear exactly the same relation they are quicker they are more certain they are more certain because you are controlling and you know you are controlling the conditions You can watch that corn all the time. You cannot watch what is happening to it after you put it in the ground you cannot see it.

Then there is another similarity between the two tests and the clinical experiments. That in your plate test—

Mr Hough—In your what?

The Witness—In the plate test, when you put the seed on the plate

Mr Hough—Plate?

The Witness—Yes. If in the plate test that seed does not come up then you are perfectly sure that the seed is not worth while planting it is not any good you can be absolutely sure of that.

Now it is just the same here. If you make under proper conditions animal experiments and you find that the drug has no action on the animals you can be perfectly sure that it has not any action on the human and that really—I mean clinically—and that really, it is not worth while trying it clinically

Further, if you find that your seed germinates that does not necessarily mean that you will have a good crop That is not the only thing that is required to produce a good crop You can put that in the ground—it may sprout, possibly—and then freezing weather may come in and your corn is cut off So, simply the fact that you get a result in your laboratory test — in your plate test, does not mean that you will get a good result from the corn if you plant it

It is just the same in animal experiments. You may find that a drug has an action in an animal experiment. That does not necessarily mean that that would be a useful drug clinically That depends on other conditions. It depends especially upon whether the clinical condition—condition of the patient demands that kind of an action You can see there is that action You can produce it under certain suitable conditions but it does not mean it is a useful drug because you may not want that action—very often you don t.

I think that is perhaps as well as I can make an illustration of the correspondence between the two

ERRORS OF CLINICAL TRIAL

Mr T J Scofield *Q*—Doctor as I understand you it may or may not be that clinical trials are sometimes subject to error Now, will you explain that to the jury or explain what these possible errors are? *A*—Yes Every physician recognizes clearly that his clinical experience has limitations and the conclusions to be drawn from them also have their limitations That has been known since the oldest times in medicine The beautiful Hippocratean oath that was administered by Hippocrates at the beginning of medical history states that 'Experience is fallacious and judgment is difficult'

He stated that because he was an accurate, discriminating clinical observer He observed as well as anybody could observe with the means that were possible at that date. He was one of the best observers that has ever been in medicine And that was the result — that was the conclusion that he arrived at from his clinical experience

Now the reason why he arrived at this conclusion was this — there are several reasons in fact The first is that the course of a disease is uncertain In many cases you cannot predict how the patient will be the next day and if you cannot predict how the patient will be the next day — if he is different tomorrow from what he was today and you have done something in the meanwhile, you do not know necessarily that that was due to what you did or due to change in the patient himself In other words the fact that you give a drug to a patient and that a certain result follows in a given time, does not necessarily mean that that result was due to that drug that you gave It might have been due to something entirely different

Now let me give you an illustration of that. Take pneumonia. Pneumonia is a disease that runs a perfectly definite course We know that. A patient gets a high fever gets sometimes out of his head he gets worse and worse for about for or five days At the end of that five days a sudden change occurs he either dies, or he gets well by himself practically without any treatment Before people fully realized that — they now know it most of them well enough — but before they realized that they used to be giving all kinds of drugs in the treatment of pneumonia drugs and other things baths and all sorts of things They would give those and the patient would go on, and after the five days a certain number would get well and a great many people attributed that to this drug or that, or something else

It has been now shown had they left those patients strictly alone they would have gone through exactly the same course of events It simply shows what the natural course of the disease is Now in the case of pneumonia we know that well enough now That is one of the few diseases — many infectious diseases are the same way they run an absolutely definite course, and we know what is going to happen Take a patient who is bleeding from a large artery Suppose you cut the artery in the hand and let the patient bleed. Now one of two things is going to happen and you don t know which it is either the patient will bleed, or the bleeding will stop it will be one or the other eventually You give a drug between the times and the patient stops bleeding but you cannot tell from that that it was the action of the drug He might have stopped anyhow — or he must have bled to death

Now all those things are along that same line Now that is one great source of error — I should say the most frequent source of error that a man physician or patient or the laity — if they are sick they use a drug and if they get well they conclude from that that they got well because they took that medicine That may be so but it need not be so It takes more accurate more careful methods of observation that will definitely fix the drug as the thing which did the trick—did the business

Another difficulty in the — a— source of error in clinical observation is the effect of suggestion Now a man or a woman differs from animals in the fact that they reason — at least they have very much more reason — and therefore they can be made to imagine things and if those things are sufficiently impressed on their imagination they are very likely to happen

If you take an individual who has been sleepless and has not slept well for some time and you tell him very emphatically That is all right, I know the reason for all that to-night I know those reasons are going to be removed, and you are going to go to sleep to-night all right and will have a sound sleep — very likely he will have that sound sleep no matter what else you do If an individual has a pain and you can only convince him distract his attention from that pain by occupying it with something else that pain will disappear Everybody knows the old trick of biting the bullet when you have pain Now the bullet has no effect on that pain It does not remove the pain it distracts the attention.

Now, all that sort of thing comes in when one gives a drug to the patient The effect may be due simply to suggestion That has to be guarded against That is very difficult

Another source of error is that very often that several things are varying in the treatment The physician prescribes a drug, and together with the drug he prescribes a lot of other things. He tells the patient to go to bed, to remain quiet, to eat certain food and not eat certain food Sometimes he gives them a mixture of medicines Now when all these things come together, of course, it is impossible practically to tell by ordinary observation what part the drug may have played in the effect, and what part it may not have played in the effect

Now, all these sources of error — and there are some more that I do not think of at the moment — now, all these sources of error can be, to a large extent, counteracted or prevented by very careful, discriminating observation, observation that goes down into every detail, and which makes the conditions just as constant as they possibly can be, methods of observation that practically can only be carried out in hospitals, where the means of observation are such as will allow of that kind of experimentation

But the ordinary observation is exposed to large sources of error, which must be taken into account when one draws any conclusion from them, and which do not occur in animal experiments, because, in animal experiments, in the first place, you are working for a short time and you know that in that time, if the experiment is properly conducted, no spontaneous changes occur, and the animal's condition is absolutely constant The only variation that occurs there is the introduction of the drug

Therefore, since that is the only change that occurs — if a change occurs — in the animal, it must have been due to that drug, and cannot have been due to anything else

Then in animals, again, you can introduce very much larger doses than you can in the human Therefore, an effect which is so slight in the human that you cannot be sure it is an effect — so slight that you cannot decide 'Did something really happen, or didn't it happen?" In animals you can use enough so that you can be sure that something happens If nothing happens with these large doses, certainly nothing could have happened with the small doses

Further, in animals, besides excluding the element of suggestion I have already mentioned you can introduce a drug in a better way You can introduce it, if necessary, directly into the tissue, where it will act Now, if you give a drug to a human individual, it may happen that that drug is not absorbed at all It has first to be absorbed It has to go through all the tissues, and part of it is excreted in that time You do not know, unless you can determine it directly, how much of that drug will reach any given organ

Now, if you can take an animal, or under certain conditions, a human individual — but you cannot do it as often with humans as you can with animals — and introduce that drug directly into the circulation, or, still better, into the organ that you are studying, you know it is there, and it is there in the doses — the best concentration — the largest and most favorable condition that you can possibly place that drug in for the effect

There is still another reason why animal experimentations are in certain directions superior Often you cannot be sure of the action of a drug because it produces several actions at the same time It acts on different things, and those different things interact, and you get a very complicated picture, out of which you can get but very little In such a case, to know that an action occurs, or, still more, to know what that action is, you have got to separate out the tissues, and to do that, you have to do physiological procedures, operations, etc, that you can do perfectly well on an anesthetized animal, but that, of course, you could not do on a human individual

In order to understand the action of a drug, the mechanism of the action of a drug, in other words, in order to really investigate the drug, you must use animal experiments

That, I think, covers the substance of your question

RELATION OF RESULTS ON ANIMAL TO EFFECTS IN HUMAN

Q—Now, Doctor, can the results of animal experimentation be transferred to the human being? *A*—Yes, they can If the structure and the functions of the animal are the same as that of the human in the respects which you are investigating — if they are the same as in the human, the results can be transferred directly to the human, except, of course, the matter of dosage which differs in different animals, and differs as far as — so far as the effect, the action is concerned, that can be transferred directly, if the structure and the function of the organs are the same If they are not the same, of course, one has to choose a suitable animal that has the same structure or function, or one has to take a larger series of animals, etc It can be transferred either directly or indirectly, and if the function and structures are the same, they can be transferred directly from the animal to the human

Q—Doctor, are the actions of drugs the same in health and in disease? *A*—Yes, the actions of drugs are the same in health as they are in disease The effects, of course, may be different They differ to some extent with conditions, the conditions that the action of the drug encounters — the actions are the same

Q—If a drug has no action on the normal animal, can it have any action, or does it have any action on the human disease, or any effect on human disease? *A*—An instance in which a drug has no action on the healthy animals and has an action, demonstrable action, definite action, on the human, is not known No such instance is known, and, furthermore, it is not only unknown, but it is inconceivable

Q—Why is it inconceivable? *A*—Drugs act by affecting the chemical components of the body That is the way in which drugs finally act Now, the chemical components of the body are so nearly related in animals and in men, in health and in disease, that it is just as inconceivable—just as impossible to conceive that a drug would act in the one case and have no action at all in the other case, as it is impossible to conceive that fire would burn pine wood and would not burn oak wood It does not burn them with the same velocity They don't burn as quickly, one as the other, but they both burn They don't burn as fast, because their chemical structure, and their physical structure is a little different, but they both burn, because their chemical structure is alike The drug acts on the body essentially in the same way as the fire acts on the wood Now, you can take your oak wood or your pine wood, and you can let it rot, then it is still there—it will still burn There is no difference in that the action is the same, and it is just as impossible to conceive of the one as it is to conceive of the other

BY MOUTH OR BY INJECTION

Q—Doctor, is there any drug which produces an effect or action when given by the mouth, which does not produce an effect when injected directly into the tissues? *A*—There is no soluble drug which has that characteristic, namely, that it produces—that is the question—it produces an action when taken by mouth and not an action when it is injected into the system That also is inconceivable, because, when you inject a drug into the system, it comes directly into contact with the tissues, much more directly than when you take it by mouth when, in the first place, it slowly absorbs, instead of entering quickly, and, in the second place, it is excreted all the time You never get as much at the time in the tissues

My answer was—the question, as I understand it—was any action on the system Of course, a drug will produce an action in the alimentary canal better when it is given by mouth, when it comes in contact with the alimentary canal, than when it is injected into the system That is a local action But an action on the system—you cannot conceive of it being easier to produce that, when the drug is given by mouth, than when it is injected into the system—speaking of soluble drugs

Now, if you take the case of insoluble drugs, the condition may be different Certain drugs may require for their solution that they should be digested, as it were Then, of course, that is a different thing altogether Then they will not act unless they are digested But substances that are soluble will invariably, almost invariably, produce a greater action, or better action, if they are injected directly into the system, than when they are introduced indirectly by way of the alimentary canal

Q—Now, Doctor, Wine of Cardui is sold as a female remedy, claimed to be a female tonic, a uterine tonic acting on the portal system acting on the womanly organs, just as a kidney remedy acts on the kidneys, curative in all sorts of menstrual disturbances, displacements of the uterus, inflammations of the uterus, gonorrheal vaginitis, sterility Will you explain, if you have an opinion on the subject, how animal experimentation might throw any light on these claims? *A*—These claims relate entirely to the female generative organs They presuppose, as you state them, an action on the uterus Now, effects on the uterus can be very well investigated in animals, perfectly well, and they—

Q—Well Doctor — go ahead Answer *A*—They can be investigated, in the first place, by an action of the blood supply on the uterus or an action of the contractions of the uterus, all these claims practically come back to those two things, an action either on the blood supply or on the contractions of the uterus, and both these things can be perfectly well investigated in animals, with very definite results, or absence of results, as the case may be.

Q—Well, what bearing has the blood supply of the uterus on these claims? *A*—The blood supply of the uterus determines the blood flow to the uterus, and, therefore, would very markedly influence such female disturbances as amenorrhea, and menorrhagia and metrorrhagia All these would be influenced, and would, to a certain degree, depend upon the blood supply of the uterus

Q—How may the blood supply of the uterus be varied, and how can this be shown by animal experimentation? *A*—The blood supply of the uterus may be varied in several different ways It may be varied in the first place by an action on the blood vessels, either directly on the blood vessels or through the central nervous system That can be determined by the blood pressure and also by the color of the uterus. The more blood there is flowing through the uterus, the deeper the color of the uterus

The second way in which the blood supply of the uterus may be affected is somewhat indirectly, through congestion of the intestines and perhaps also through congestion of the portal circulation, that is to say, the circulation of the liver In intestinal congestion, or portal congestion any such congestion would also be shown definitely by changes in the blood pressure and by changes in the color of the intestines

Furthermore anything or most things or many things that alter the blood supply of the intestines do so by irritating the intestines and that means that the intestines will move more, so by watching the intestines one obtains further light on that subject.

Another way in which the drug may act or influence the blood supply of the uterus is by acting on the muscles of the uterus itself — the uterus itself The uterus is a muscular organ and consists of what is called smooth muscles or muscular fibers and between these fibers, or certain ones of these fibers, run the blood vessels

If these fibers contract together that compresses the blood vessels and that is the way in which ergot acts after childbirth When the uterus is large and the woman is bleeding a good deal, all you have to do to stop the bleeding is to contract the uterus down so that the fibers press on the blood vessels and squeeze them together

Now an action of that kind would be shown by increased contraction of the uterus The contractions of the uterus can be increased That also can be very imminently and easily shown by animal experiments.

Q—Now then doctor assume it to be a fact that Wine of Cardui has no effect on the blood pressure even when it is injected into a vein in large doses. Assume further that neither Wine of Cardui nor viburnum prunifolium the bark of the stem or of the root has any effect on the blood pressure, nor on the uterine contractions the color nor on the intestinal contractions or color

Assume further that Wine of Cardui viburnum prunifolium and carduus benedictus and marianus have no effect on the contractions of the excised human uterus both the alcoholic and the evaporated preparations being used

Assume further that in the animal experiments the drugs were given by mouth under the skin and into the intestines

Assume further that Wine of Cardui when injected into the human uterus in the living subject, produces no effects of any kind

With these assumptions in your mind have you an opinion as to the effect of Wine of Cardui in menstrual disorders? *A*—Yes I have an opinion.

Q—Wine of Cardui and the other drugs which I have named Have you an opinion? *A*—You have in your question covered all the ways in which I can imagine a drug as affecting the blood flow of the uterus You have in your question given these not only in the best possible method, but you have also given them by practically many essential modifications of the method or kinds of methods of administration.

You state that under those conditions it produced no effects of any kind in any of these contractions. The only conclusion that I can draw from that is that it would not affect the menstrual flow

Q—Could it be possible in your opinion that a drug might act on the blood flow in diseased conditions of the human being and have no effect on healthy animals? *A*—No that is quite inconceivable. The structure and functions and the distribution of the blood vessels are the same in the human and in animals and therefore it would be quite impossible to make such an assumption.

MENSTRUAL DISORDERS

Q—Doctor are there any other ways in which a remedy might affect menstrual disorders than acting on the blood supply of the uterus? *A*—Oh yes. It might act upon the cause of those disorders

Q—Now when you say the cause of the disorders do you mean the cause which produces the trouble or disorders? *A*—Yes take tuberculosis and that sort of thing anemia.

Q—Now Doctor would tonics be of any value in menstrual disorders? *A*—So far as the menstrual disorder proper is concerned, they would be of no direct value. They might be of some use after the cause of the disorder has been removed They might be of some use then by hastening the recovery of the patient, restoring her perhaps somewhat more rapidly in her general health But, so far as the menstrual condition is concerned, they would have no effect on the menstrual disorders in the way in which I have mentioned here

Q—What is meant by tonic? *A*—A tonic is a measure that increases the nutrition and vigor of the body at large. If you are using the term simply as a tonic, that is what it does.

As a matter of fact the word 'tonic is used in two quite different ways according to whether you speak of the body at large, or of a muscular organ in particular

The meaning when we speak of a general tonic, or a tonic without qualification is the definition that I just gave something that increases the health and vigor of the body at large. The best example of that to make my meaning clear clearer than anything else the best typical tonics are proper rest and exercise, proper food outdoor air, sunshine and things of that kind and when they are indicated such drugs as iron and arsenic. That is what we mean by a general tonic.

Now in the case of a muscular organ when we speak of a tonic acting on a muscular organ particularly then we mean a drug that produces increased contraction of that muscle. For instance a heart tonic would be a tonic that increases and strengthens the contractions of the heart A uterine tonic that is a muscular organ would be a drug that strengthens the contractions of the uterus There are those distinct two meanings a general tonic and a muscular tonic.

BITTERS

Q—Doctor are carduus benedictus and viburnum prunifolium tonics? *A*—Both of those drugs are bitters and bitter substances generally are believed by some to act under certain conditions as tonics by improving the appetite and improving digestion

Q—Are the bitters contained in carduus benedictus and viburnum prunifolium superior to other bitters? *A*—Whatever action is produced by bitters in that way is owing solely to their bitter taste and only to their bitter taste. Therefore one bitter is no better than another bitter The only point is are they bitter or are they not bitter? One bitter is as good as any other

Q—How do the bitter substances act as tonics in what way? *A*—That is not accurately known and in fact there is considerable reason to doubt whether they do act in that way or whether they don't act in that way They have had a good deal of — considerable reputation since the oldest days of medicine, and before that probably for improving the appetite and improving digestion and in that way indirectly improving the nutrition.

Q—Is there any scientific evidence for such action doctor? *A*—Experiments have been made quite extensively to determine whether that action is possible that action that is popularly assumed and stated to exist — whether it actually exists

There has been a great deal of difference of opinion as to whether it actually exists or not and a great deal of experimentation has been done about it

The earlier literature in regard to that the earlier statements and the earlier experiments generally are rather contradictory on that point The latest work that has been done upon it — the earlier works, some say that they have and some not

The latest work that has been done on that subject is by far the best that has been done It shows conclusively, to my mind at least that the bitters have no effect in increasing the appetite or increasing the digestion or any functions of digestion in normal animals or in normal man

Therefore, if the actions occur at all, they must occur only under special conditions and those conditions have not been investigated

There has been only one piece of work done on that particular subject and that has been done on extremely anemic animals, animals that were bled several times and reduced to a degree of extreme anemia Those animals when they received bitters, did show a slight effect Their appetite did not become normal or anything like normal Their digestion did not become normal or anything like normal, but it did improve a very very little

Now that is the only positive evidence for the value of such tonics taking all the work into consideration I mean the only one that is really conclusive work.

Now as to how they act, as I said before, every one is agreed that the action is simply through or is connected with the bitter taste in some way or other if it occurs at all.

I have always thought that one possibility of the contradictory results was this it is a peculiar fact that everybody has observed who has paid any attention to bitter tonics, it is a peculiar fact that they only act when they are taken half an hour or so before meals If they are taken at any old time in the day, they do not act as tonics Nobody has claimed that they act as tonics then Everybody who has any acquaintance with the subject says that they must be taken at that particular time

Now it has always appeared to me that one possible explanation of the thing was this the function of the stomach depends to a great extent upon one's eagerness to receive food. If you simply suggest to an individual, or even an animal by showing it meat (a dog for instance) that he is going to be fed, then his digestive juices begin to flow

Now it seemed to me that probably the action of the bitters simply consisted in sort of a bitter dinner bell The suggestion is that bitter and half an hour after that he knows he is going to get his dinner and under those circumstances the chemical juices start to flowing just as if you hold a piece of meat before a dog and the dog knows that in half an hour from that he is going to get his meal If you do that with a dog if you show him the meat and he is accustomed to it that means to him that pretty soon it is feeding time and then his juices begin to flow Now I rather think that that is the way the bitters act but there is no positive work on that subject

Q—Then it is your opinion if I understand you that a medicinal solution directed to be taken three or four times a day, without reference to meals would not be a bitter tonic? *A*—Not unless it happened to be taken by accident at this particular time and it must be taken regularly That is another thing about tonics they must be taken regularly If they are going to produce any action you must train your patient to accept that fact.

UTERINE TONICS

Q—What is your opinion, Doctor as to the value of bitters as tonics in uterine displacements and disorders, or uterine diseases I should say? *A*—They would have no effect on the uterine disease as such of course

Q—You spoke of the investigation of uterine movements What light would they throw upon the value of a preparation that is claimed to be a uterine tonic to take in the slack of the muscles and nerves and have a sedative action on the uterus and act upon the womb itself to help pull up and replace the womb in its proper position? *A*—The claims that you state there appear pretty inclusive, and it would be pretty difficult to imagine a drug that would have all of those actions at the same time. But if any of those actions did exist, they could undoubtedly be shown definitely by experiments on animals in which the uterine movements can be directly watched and recorded

Q—Doctor define what you mean by a uterine tonic, stimulant and sedative? *A*—A uterine tonic is a drug that contracts the uterus down causes it to go into a more tonic state as it is called makes it more firm, makes the muscle contract more firmly

A uterine stimulant is one that increases or heightens the contractions the contractions go up and down and it will go up higher and perhaps make them more frequent. It increases the individual contractions whereas the tonic has more or less permanent reactions

A uterine sedative or uterine depressant as it is sometimes called weakens the contractions of the uterus, so that instead of being this way they will be only slight, or only very slow (The witness apparently indicates with his hand without the sight of the reporter)

Q—Are the contractions of the uterus susceptible to the action of drugs? *A*—Oh very strongly so yes

Q—How can these actions be investigated? *A*—They can be best investigated on the animals. One can take a living animal, anesthetize it of course, and under a bath of warm saline solution so that it does not get irritated by the air attach a thread to one end of the uterus and let that go up to a lever and tie it to one end and each contraction of the uterus will move that lever and make it write on the recording surface of a cylinder that revolves That is one way

Another way one can get a uterus right out of the body and suspend it in a saline solution that is kept warm and is supplied with oxygen and then tie it to a lever and it will write.

That can be done on the human uterus uteri that have been removed by operation for instance as well as on the uteri of animals

Any of these ways will give a very definite tracing The uterus itself is made to record Nobody is doing anything and it is made *to record its own movements* It does that itself and there records them itself so that the observer or operator does not enter into the thing at all directly

Q—Is the uterus that is excised and taken out of the living subject alive after it is taken out? *A*—Yes, as is shown by its contractions Dead things don't move It is just as alive as a *rain worm when* you cut off the head and it goes on wriggling, just as much alive

Q—Will an excised uterus, a uterus that has been removed from the body, actively respond to the drugs that act clinically on uterine movements? *A*—All the drugs that are known to affect definitely the uterine movements clinically, do produce striking changes in the contraction of the animal uterus after it has been excised, under any of these methods that I have named

Q—Well now, doctor, let me ask you whether or not the uterus *is alike in animals* and in human beings? *A*—The structure is the same, the functions are the same, the nerve supply is generally the same and the blood supply is the same They are the same in every respect except the size and the shape

EFFECT OF DRUGS ON UTERINE CONTRACTIONS

Q—Have you made any experiments yourself on the effect of drugs *on the uterine contractions? A*—Yes, sir

Q—What experiments have you made with Wine of Cardui, and *the fluidextract* of carduus benedictus, if any? *A*—I have made a series of experiments on the excised uterus of a guinea pig and also a series of experiments on the excised human uterus, both with Wine of Cardui, and with fluidextract of cnicus benedictus The fluidextract of cnicus benedictus—I used two samples One was prepared from the drug by the chemical laboratory of the American Medical Association, and the other was the extract marketed by Eli Lilly & Company, the fluidextract of Eli Lilly & Company

Q—Were the uteri that were used in those experiments normal? *A*—I used three human uteri in these particular experiments. One *of these was from a case of cancer The other two uteri were normal* in their structure They had been *removed on account of displace*ments, but their structure was normal

Q—How about the animals that you experimented on, if you experimented on animal uteri? *A*—The guinea pig uteri were strictly normal

Q—Well, did the different uteri and the uterus of the guinea pig —or the uteri, as it may have been—I don't know whether you said *one or more A—Several*

Q—Did they react alike or not? *A*—They reacted exactly the same way, yes I will leave it that way for the present

Q—What was the effect produced by the use of Wine of Cardui in that way? *A*—The Wine of Cardui I employed in concentration, *adding it* to the saline solution that was around the muscle in large quantities as compared with the volume of the muscle, I used that in concentration *ranging from one part of* Wine of Cardui to 1,500 of the solution, and strengthened that in different experiments so I got one part of Wine of Cardui to thirty in some of the experiments of the solution In those various concertrations—that last concentration is much higher than anything you can conceive of, occurring in the actual body—in all of these experiments there was absolutely no effect on the contraction of the uterus, either in the guinea pig or *in the human*

Q—Now, what result did you obtain with the fluidextract of carduus benedictus? *A*—*The fluidextract* of carduus benedictus, I used somewhat the same concentration I used it in the proportion of one to 1,500 up to a concentration of one to sixty seven, that is one part of the drug to sixty seven of the saline There was absolutely no effect

From one to sixty seven on to one to thirty three, if you get above the concentration of one to sixty seven, then you get a progressive *depression of the movements, which was undoubtedly* due to the alcohol in the fluidextract A concentration of one to thirty three would make about 2 per cent of absolute alcohol in the *solution directly* in contact with the drug and permanently in contact with it and such a concentration undoubtedly depresses the contraction of the uterus, being in contact with it.

Q—Doctor, did you make any tracings of these experiments? *A*—Yes sir, I have some *typical tracings* with me that will illustrate the matter

Q—Have you got them with you there? *A*—I have them with me yes

Q—I wish you would produce them, doctor (Papers produced) These are *made* by you? *A*—Those were made by me, yes, sir

Mr T J Scofield—Mr Reporter mark these Defendants' Exhibits 73 and 74

(Papers marked as indicated)

Q—Doctor, will you take these and explain—

Mr Hough—Let me look at them for a moment

Mr T J Scofield—Yes, this is the first one

Q—Doctor, I hand *you now* these exhibits, marked respectively 73 and 74 Will you indicate to the jury or explain what those lines indicate? Explain the tracing, so that they may understand the exhibits *A* (Exhibiting papers to jury)—This first wave line here represents the contractions of the normal human uterus excised

Mr Walker—Are you using 73? *A*—73, yes That was the Wine of Cardui itself This wavy line on each of these tracings *indicates* the contractions of the uterus (Indicating on tracing without the sight of the reporter) Now, at this point here Wine of Cardui was introduced in a concentration of one to 150 and you see this contraction go on, there is *no change* Here the concentration was strengthened to one part to fifty, one part to fifty *and* still the contractions go on without any change Here it was increased to one to thirty, and you see these waves are still present, no stronger and no weaker, nor faster nor slower, just exactly the same

Mr T J Scofield—Now, that Exhibit 73 represents experiments with what? *A*—Wine of Cardui, and *the human uterus.*

Q—Wine of Cardui on the human uterus? *A*—Yes sir Shall I exhibit 74 *now?*

Q—If the gentlemen are satisfied with that.

The Witness—The point is that the waves that are shown on this tracing, which are the normal contraction waves, are *not changed* at *all by* putting in the drugs They continue just as they were before Now, here is the same uterus—

The Court—You are using what?

Mr T J Scofield—Wait till we get through with this one. Now Doctor, will you take Exhibit 74? Judge, do you care to look at that? What is that Exhibit 74? *A*—Exhibit 74 shows the effect of the fluidextract of carduus benedictus on the same uterus.

Q—Explain it to the jury *A*—The same uterus left in the same solution That is to *say*, the Wine of Cardui was left in and then so that it could still act—this fluidextract of carduus benedictus was *added to that.* You see those waves are still the same At that point the fluidextract of carduus benedictus, the Lilly kind was added, one to 150 and it still goes on, *no change.* At that point (indicating on tracing without sight of the reporter) some more was added so as to make a total of 1 67 and it still goes on without any change Now, after that *there is one normal contraction*, but then it gets weaker and here we put in a little more so as to make a total of *one to thirty three, added more to it and there the contraction dis*appeared, ceased altogether

Mr Hough—I suggest that he just pass that around among the jury, and testify so that everybody can hear

Mr T J Scofield—He has a right to explain it

The Court—*Just so long as the reporter gets it all*

Mr Hough—And so that all the jury can see.

Mr T J Scofield—Doctor, you spoke of the Lilly kind What did you mean by that, a preparation from the Lilly Laboratories? *A*—Yes, sir, fluidextract prepared by the firm of Eli Lilly & Company

Mr T J Scofield—If the Court please, I offer Exhibit *73* in evidence, and I also offer Exhibit 74 in evidence. *They are admitted* are they, your *Honor?*

The Court—I think they were pretty effectually in before they were offered

Mr T J Scofield—I thought so, but at the same time I do not want any question about that.

Mr Williams—Oh, we agree to it

Mr Hough—For what it is worth

Mr T J Scofield—You explained *how these tracings were made*, didn't you? *A*—Yes sir, I think so

Q—In a question which I asked you some time ago, I described to you the results obtained in certain other experiments with Wine of Cardui, carduus benedictus, carduus marianus, viburnum prunifolium (the bark of the stem and of the root), in the form of fluidextracts or solutions in 20 per cent of alcohol and evaporated solutions taken up *in water Do you still have these results in mind? A*—Yes.

Q—Now, from those results, together with your own experiments, have you an opinion as to whether any of these drugs *that I have* named have a tonic action or a sedative action, or any other action on the uterus? *A*—They all agree in showing that there is no tonic action, no sedative action and no form of action on the uterus, or uterine contractions under any conditions

Q—*Have you an opinion* as to whether Wine of Cardui could have any effect on the uterus when used according to directions, namely a tablespoonful three or four times a day? *A*—I have an opinion

Q—What is the opinion? *A*—That it could have no effect whatever

Q—Why? *A*—Because the conditions that you named, if it is actually used according to directions, would not be nearly as favorable to producing an action as the experiments that you described, and the *experiments* that I explained So that if there was no effect under these extremely favorable conditions, under the conditions of the directions, a *tablespoonful* three *or four times* a day to a woman, it could not have any effect

Q—Could these drugs, doctor, increase the nutrition *of* the uterus without increasing the uterine contractions? *A*—No The nutrition *of a muscular organ* is increased by drugs only by *exercising* the *muscle of that organ*, but throwing it into contractions, the muscle of the uterus or of the part—it is just like any other muscle You *cannot very much increase* the nutrition of your biceps muscle and make it bigger and stronger, except in one way, and that is by exercising it and *making it contract more* It is exactly the same way with the muscle of the uterus or the heart. The only way you can improve its nutrition is to *make it* contract *more,* by drugs.

Q—Could a uterine tonic or any drug replace a displaced uterus? *A*—No

Q—Why? *A*—A misplaced uterus means a mechanical condition that could only be corrected by mechanical means by *lifting* it again *into place*

Now, while it is true that there are certain ligaments *attached to* the uterus, those *ligaments do not* contain anything that could lift the uterus about They contain, it is true, certain of them—only a few however—contain a very *little muscular* tissue, but that muscular tissue in the round ligament (that is the one which does contain muscle), that muscular tissue is *so small in amount* that it could not lift anything More than that, it does not respond, it does *not* contract even to the stimulation of the most *powerful* drugs that act on the uterus, that muscle does not contract at all So any way we look at it, there is no way in which a drug could *replace* a displaced uterus. *It is* a *mechanical* impossibility

EMPIRICAL AND SCIENTIFIC MEDICINE

Q—What is the difference between empirical and scientific medicine? *A*—It depends on the way in which you use the term "empirical." Empirical really means based on experience. Now all medicine is based on experience Scientific medicine is based on experience and on experiments so that there should be if one properly uses the terms there should be no difference between empirical medicine and scientific medicine

Very commonly however the term 'empirical medicine' is applied rather slurringly to superficial slovenly observation observations that are not thorough and scientific medicine' is applied to medicine that is thorough medicine, that takes into account chemistry and pharmacology clinical observations and the whole range of medical science It is simply a question of whether one is as thorough as you can make it or whether it makes no attempt at thoroughness. That is the way the term empirical is sometimes employed.

DRUGS IN COMBINATION

Q—Doctor if two drugs are given together, does that influence the action of each of the drugs? *A*—Oh yes it may be influenced in several different ways It may influence it by simply adding the action of one drug to the action of the other drug You take a drug that acts in one direction and another drug that also acts in the same direction and you give them together and you may get twice as *much action* as you get *from* either one alone

Or again, you give a drug that acts in one direction and another drug that acts in the opposite direction, and you give them together and they may neutralize each other and there may be no effect simply by adding the action of one to the action of the other That is simple addition. That is by far the most common way in which the drugs influence the action of each other simple addition

Then in a few instances relatively a curious thing happens. If you give one drug with another drug you may produce a greater action than you would have produced with either drug alone a greater action than with either drug alone, even if you doubled the dose. Take one drug and if you gave twice as much of that drug you don t produce as much action as if you give that drug with another drug That is what is called synergism.

Then there is another proposition You give one drug to produce a certain action and you give another drug and you find that the action is less than the simple addition of the two actions That also occurs sometimes

You have the simple addition. In fact you may get the simple plus or minus, or you may get a greater effect than you would expect, or you may get a smaller effect than you would expect.

The most common way all things taken into consideration, is as I say simple addition and that is what one expects to happen until one has direct confirmation that something else does happen One is not justified in assuming synergism unless one has actually demonstrated that there is synergism and until one has demonstrated it you must not assume it There is no general rule which applies It is a matter that has to be determined in every individual instance.

Q—Assume that Wine of Cardui contains caramel Will you tell the jury what caramel is. *A*—Caramel is burnt sugar The sugar has been heated until it has burnt to a certain degree and gotten brown or black.

Q—Is it known to have any medicinal action? *A*—No it is not It is simply used as coloring matter

USE OF ALCOHOL

Q—Wine of Cardui contains 20 per cent. alcohol It is advised to be taken three or four times a day in tablespoonful doses, each dose corresponding to 48 drops of pure alcohol Have you an opinion as to the effect of these doses of alcohol on female diseases? *A*—Yes.

Q—What is it, doctor? *A*—It would be essentially the exhilarating and narcotic effect of the alcohol.

Q—Would that action be of any benefit whatever to the female? *A*—It certainly would not tend in any way to cure those various female disorders It might make the patient feel better it might exhilarate them and give them temporary relief but it would not in any case improve the conditions of course.

Q—Would the character of relief which you say it might give, would that tend to cure the disorders? *A*—Not at all

Q—Have you an opinion as to the general advisability of using alcohol in female diseases? *A*—As a general *proposition* I would consider it inadvisable

Q—Why not, doctor why is it inadvisable? *A*—I would consider it inadvisable because if you produce an exhilaration or relief in that way you are not doing the patient any good and you may do the patient considerable harm

There are many ways in which it may do harm habit formation and all that sort of thing but it may do harm a little more directly in this way the patient feels relief The result is that she may not get the treatment that is really needed for the condition. The result of that would be that that condition would get worse naturally or it might get worse, and in that way relief that could be obtained would not be obtained the real relief and in that way the condition might become incurable. So besides from the deleterious effects of the alcohol as such which would be taken into consideration it might have a deleterious effect in this other indirect way by leading to the neglect of the proper treatment by making the patient feel that she has been relieved when as a matter of fact, she has not been relieved

Q—What is the effect if you know of alcohol on the absorption of drugs? *A*—The effect of alcohol on the absorption of drugs varies undoubtedly with conditions It used to be the belief that certain concentrations of alcohol diluted alcohol in other words increased absorption. That belief was based on the experimental evidence on a very few conditions and on a very few drugs.

Subsequent work has shown that, under other conditions and conditions which approach more nearly to the natural—that under other conditions the effect of alcohol is rather to hinder the absorption of drugs

In other words the effect on absorption cannot be predicted It has to be observed actually by experiments and unless these experiments have been made in a particular connection it would be quite unwise to predict what the effect of alcohol on absorption in that connection would be

Q—Doctor, would the alcohol in Wine of Cardui act just like its equivalent in whisky? *A*—The effect on the system of stimulating and the narcotic action, would be just the same. They would be indistinguishable

Q—Would its use strictly, according to directions, three or four tablespoonfuls a day produce the effect of alcoholic stimulation? *A*—Yes depending, of course, on the susceptibility of the individual

Q—Is it correct that a preparation containing 20 per cent of alcohol is non intoxicating? *A*—No, that would not be correct

Q—Is it correct, in your opinion to say that it contains no habit forming drug? Is it correct in your opinion to say that Wine of Cardui contains no habit forming drug, assuming that it contains 20 per cent of alcohol? *A*—In view of the wide prevalence of the alcoholic habit, that is certainly incorrect

Q—Assume doctor that an entire bottle of Wine of Cardui has been taken without producing nausea, or vomiting diarrhea or any other effects other than those of alcohol Assume also that Wine of Cardui contains in a tablespoonful approximately the extractives from 30 grains of cnicus benedictus and of approximately three grains of viburnum prunifolium extracted with 20 per cent alcohol Bearing all this in mind have you an opinion as to whether Wine of Cardui contains anything that would prevent its use as an intoxicant, tipple or booze? *A*—It contains nothing that would prevent its use as an intoxicant tipple or booze

Q—Is ordinary alcohol destroyed in the body? *A*—Yes sir

Q—To what per cent, doctor, do you know? *A*—Something like 90 to 98 per cent is oxidized in the body to water and carbon dioxid It is burnt

Q—Does this oxidization prevent the alcohol from producing its actions alcoholic actions? *A*—No If it prevented the alcohol from producing its alcoholic action, then one could never get an effect *from* alcohol at all under any circumstances. The fact that one can get drunk on alcohol shows conclusively that the oxidation of it does not prevent it from acting The explanation of that is that the action *of alcohol* occurs almost at once Its oxidation is a slow process In other words a person becomes drunk before the alcohol is burned up

Q—Does the rate or degree of oxidation depend upon the dose and concentration of the alcohol? *A*—To a slight degree on the dose not at all on the concentration In any case the greater part is burnt up the greater part of the alcohol is burnt up anyway

Q—What becomes of the per cent of alcohol that is not oxidized in the system? *A*—That is excreted by the lungs and by the kidneys

Q—Would the stimulant and narcotic action of 48 drops *of alcohol* be greater or less if it is given in 20 per cent or in 55 per cent dilution? *A*—It would be indistinguishable just as the narcotic and stimulant effect of the same dose of alcohol is indistinguishable whether it is given in the form of whisky, or in the form of beer

Q—Is alcohol a common constituent of official drugs? *A*—It is a constituent of certain fluid preparations the spirits and tinctures and elixirs and fluidextracts It is not a constituent of other fluid *preparations*, glycerites emulsions syrups—those are all that I think of at the moment.

Q—Infusions? *A*—Infusions and decoctions yes sir There is one infusion—I may make an exception—there is one *infusion* which at present contains a small percentage of alcohol Otherwise they do not contain alcohol.

Q—Does the solid extract or solid drug contain any *alcohol?* *A*—The solid drugs of course do not alcohol being a liquid

Q—Now are these various preparations that you have just referred to as containing alcohol are they prescribed by physicians? *A*—Oh yes

Q—Do the same objections hold for the official alcoholic *preparations* as for Wine of Cardui? *A*—In a way they do and in a way they do not. It depends altogether on the conditions If the official preparations are advertised like the proprietary preparations, if they are bought like the proprietary preparations indiscriminately over the counter if they are used without fully taking into account the alcoholic effects then the presence of alcohol in them is of course just as objectionable as it is in the case of proprietary preparations

If on the other hand they are not used by the public in the same way or if they are prescribed under certain conditions *by physicians* namely where the physician knows the patient and knows what the patient is and what the effect is he wants to produce, takes the effect of the alcohol into account, where he uses the preparation over a limited time only and where he uses the preparation the dose of which cannot be spontaneously increased by the patient because it contains active ingredients—where several or all of these factors obtain at the same time, then evidently the same objections do not hold to the official preparation as do to the proprietary medicines that are not protected in these various ways.

Q—Assume doctor that the following United States Pharmacopeia preparations contain more alcohol per dose than does Wine of Cardui

Spirit of anise
Tincture of sweet orange peel
Spirit of juniper compound
Tincture cimicifuga
Wine of coca
Tincture of nut galls
Paregoric

How does the prescribing of these compare with the use of Wine of Cardui? *A*—The first two preparations you mentioned were spirits of anise and *spirits of orange* These preparations are used principally for flavoring, and in very small amounts, and contain much less alcohol of course than the 48 drops, because there are *only 2 or* 3 drops used It is only under comparatively rare conditions that they are used in the full dosage, *namely in cases of colic and things of* that kind In those cases, in the first place, they are only used for a short time They *are only intended to be used while the colic* lasts, and everybody knows that colic does not last more than a *day or two usually*

In the second place, it is the action of the alcohol that is there that is a part of the desired action Alcohol relieves colic. There are two distinctions, one is that they are only used for a short time and the other is that they are used in such small quantities

The next preparation you mentioned, I believe, was compound *spirit* of juniper?

Q—Yes, that *is right* *A*—That is *practically* gin, and when it is used, it is used with a full realization that it contains alcohol and it is used under conditions where the alcohol plays a part in its action

Q—Tincture of cimicifuga is the next one *A*—Tincture of cimicifuga is a typical stomach bitter It again is used partly for the effect of the alcohol that is in it In other words, the alcohol there contributes to the effect It is used in certain types of indigestion, and in certain types of indigestion, the alcohol helps as a sort of counter irritant It irritates, just like a liniment helps a little sprain

Q—*Wine of* coca *is the next one I mentioned* *A*—Wine of coca was used to a small extent by physicians, mainly for its alcoholic stimulant. It is really a form of alcohol just like a form of wine, and when one uses Wine of coca, one uses it partly for the alcoholic effect, and partly for the stimulating effect of the cocain that is in it I *personally* have *never known of a physician* that ever *prescribed* Wine of coca, and it is being dropped from the pending edition of the United States *Pharmacopeia* as an undesirable article

Q—It is being dropped *from* the pending *edition* of the United States Pharmacopeia You mean the edition that is coming from the press? *A*—The edition that is coming from the press, yes sir

Q—I next mentioned tincture of nut galls, doctor *A*—Tincture of nut galls is used as an astringent in diarrhea *Of course it would only* be used for a short time Furthermore the very astringent that is there would preclude its use as a beverage in larger doses than the ones that I indicated practically If it were tried in a large dose it would interfere with the patient's bowels, and they would become so locked up, that he would have to leave it *off* in a very short time The last preparation, if I recall it, was paregoric?

Q—Yes *A*—Paregoric contains *alcohol, opium and camphor Those* are the essential constituents It contains several others besides It is used in colic and diarrhea, usually for the opium effect and that very opium effect would preclude its abuse in larger amounts, except by morphin habitues, of course

Q—Now, doctor, assume *it to be a fact that panopepton* contains more alcohol per dose, than does Wine of Cardui How does the prescribing of this *preparation* compare with the use of Wine of Cardui? *A*—Panopepton is a proprietary preparation It is practically an alcoholic food preparation That is to say, it contains certain soluble food elements, sugar and digested meat, and that sort of thing, and alcohol It is prescribed usually during convalescence, sometimes *in fevers* When it is so prescribed, the alcohol plays a very distinct part in its action It acts under those conditions, partly as a food and *partly as a sedative* and an exhilarant Here again, the alcoholic action is a desired element, when it is prescribed It is not simply an accident *that creeps* in but it is considered, or should be considered, when it is prescribed Certainly it produces a positive part of the effect

Q—How does the dose of alcohol in tincture of iron, quinin and strychnin compare with the alcohol in Wine of Cardui? *A*—The elixir of iron, quinin and strychnin, like most other elixirs, contains about 25 per cent alcohol The dose of quinin, iron and strychnin is a teaspoonful, so that the dose of alcohol never would approximate 15 drops per dose as compared with the 48 drops you are asking me to assume in the *Wine of Cardui* The alcohol per dose would be about 15 drops

Q—Does it contain anything to prevent *its excessive use?* *A*—Oh, yes it contains *the strychnin*

Q—The strychnin you say? *A*—Yes

COUNCIL ON PHARMACY AND CHEMISTRY

Q—Doctor, you *state* that you are a member of the Council on Pharmacy and Chemistry of the American Medical Association? *A*—Yes, I have been since *its foundation*

Q—What are the functions of this Council? *A*—The Council was founded by the trustees of the *American Medical* Association I think in 1905, about 11 years ago, anyway, with the purpose of investigating the drugs that are prescribed by *physicians, particularly* I mean the *proprietary*, as distinguished from the official drugs and of informing the medical profession as to what it could find out *about these* drugs the medical profession as to what it could find out about these drugs the medical profession as to what it could find out *about these* drugs

That was *and* is the purpose of the Council on Pharmacy and Chem istry, to collect and publish information about the drugs that are pre scribed, proprietary drugs *or* unofficial drugs, rather—*that is* the exact definition, unofficial drugs that are prescribed or offered to be pre scribed by physicians

Q—What was the *occasion* of this foundation, doctor? *A*—As I understood it, the occasion of the foundation of the Council was a desire *of* the trustees of the American Medical Association to be informed regarding the remedies that sought advertising space in The Journal of the American Medical Association

Before that time, The Journal tried to pass judgment *itself on* the character of the numerous *preparations* that are submitted to its advertising pages, and it found that that did *not* work out very well Very often it was caught

It *therefore found that* job was too large for it to handle, and therefore appointed a body of men who would make a special study *of this subject of unofficial* drugs and left the judgment of these drugs and the investigation of them to this council That was the occasion *of it*

The object into which it finally developed was not confined to The Journal at all, but to informing the profession in general as to what it could find out about the preparations that physicians were using

Q—Doctor, what is the book known as New and Nonofficial Remedies? *A*—That is an annual publication of this Council on Pharmacy and Chemistry It contains the descriptions of the articles that have been accepted by *this Council, investigated* and found on the whole worth while

Q—*What determines* the admission of a preparation to this book? *A*—That is determined by whether *the article* complies with the established and printed *rules* of the Council for the admission of the articles?

Q—What is the object of those rules? *A*—The object of those rules is that the full truth, and nothing but the truth be told about an article that physicians are asked to use

Q—Are secret *remedies* admitted? *A*—Secret remedies are not admitted, that is to say, remedies the composition of which is not known, are not admitted, *they are not admitted to this book*.

Q—Now, why is this restriction made, doctor? *A*—That restriction is made because *no physician, with full understanding*, prescribes a medicine unless he can find out about its composition. If he cannot *find out about its composition*, he lays himself, or rather he lays his patient open to numerous dangers

In the first place, he cannot use the drug itself intelligently, if he *does not know what it is In the second place*, he is apt to make very dangerous combinations if he does not know what is in the drug He may add some drug to this mixture that he prescribes, that is in the mixture itself He may thereby increase the dose. He may increase it above the safe limits, or he may add strength to it—he may add something to it not knowing what is in it, that interferes one with the other and he does not get the desired *effect* in that case, without the medicine being at all at fault.

Then again it is a well known fact that quite a large number of people have peculiar susceptibilities to drugs which a physician must guard *himself* against—towards *special* drugs—that a physician must be on his guard against If he does not know what is in that mixture he cannot guard against them and he finds it very difficult to recognize them when they do occur

For those reasons—there are probably some others that don't occur to me at the moment, but for those reasons amongst others let me say then, a physician should not really prescribe and certainly should not be asked to prescribe medicines, without being able to find out about their composition In other words, he should not be asked to prescribe secret remedies, and for that reason secret remedies are not accepted by the Council

Q—Does the Council *admit remedies* that are advertised? *A*—It admits remedies that are advertised to the medical profession It does *not admit remedies that are advertised to the public direct*.

Q—Why is this restriction made, doctor? *A*—That restriction is made because, in the experience of the *Council, remedies* that were advertised, or are advertised to the public are very apt to be detrimental, to do more harm altogether than they do good

Therefore, in the interests of public health, the Council would be inclined to take that action, especially as it is dealing only with remedies that should be used by physicians, and *for those reasons* that I started to state physicians should not, in the opinion of the Council, use drugs generally that are advertised directly to the public There may be individual exceptions to that, but as a general rule, physicians would *not use them or should not use them*

Q—Doctor, are the actions of the Council compulsory on the physicians? *A*—*Oh, no The Council simply informs* and in that way advises Whether its advice is taken, or whether its information is considered, that is *really not the affair of the Council*, and it has not even any means of knowing what physicians, or whether any physicians for that matter, (except by some physicians writing in) follow its advice It certainly has no means of compelling anyone to accept its opinions, even if it had the desire

RULE OF THE COUNCIL

Q—Now, are the reasons of the Council as to its *actions in regard* to direct advertising set out in the rules themselves? *A*—*Yes, they are fully explained in the rules of the Council*

Q—Have you a copy of those rules? *A*—Yes I have

Q—Will you produce *it? (Pamphlet* produced by witness) What rule is it, doctor? *A*—The mention of the direct advertising, and the fact that remedies (with some *exceptions*) that are directly advertised to the public, are not admitted by the Council, is stated in Rule 3 of the Council The reasons for this are stated in the explanations to Rule 3 which I have here

Q—Will you just read this, doctor, that is, the parts that bear upon this question Rule 3 *A*—Shall I read the rule first, and then the explanation, or will you take the rule for granted? *A*—(Reading) Rule 3 *Q*—Yes, so as to get it in the record *A*—(Reading) Rule 3 *Q*—Yes, so as to get it in the record the public will Direct advertising No article that is advertised to the public will *be accepted or* retained, but this rule shall not *apply* (2) to disin fectants germicides and antiseptics—

Mr Hough—You are not reading the whole of the rule there, are you? *A*—Yes.

Q—Isn't Rule 3 "*Direct advertising*, lay advertising?" *A*—Yes, sir, that is what I am reading

Q—Are you reading the *rule?* *A*—I am reading a copy of the official rules I am reading the rules *Perhaps you are looking at* the explanation

Mr Hough —No I am reading the rule It says—

The Court —What is the date of yours?

Mr Hough —1914

The Witness —Mr Hough is reading out of the rules as they are contained in a book I am reading out of a copy—

Mr Hough —They ought to be the same

The Witness —They are identical There is some confusion Perhaps if you give me the book I can clear it up

Mr T J Scofield —I will hand you the book that I was examining you from 1916 March 1

The Witness —You are reading from the explanation, and it is the rule proper that I was reading *Shall I read this again?*

The Court —Go ahead

The Witness —I read then from the beginning and go on "Rule 3 Direct advertising No article that is advertised to the public will be accepted or retained

Mr Hough —Accepted or what?

The Witness —That means for this book New and Nonofficial Remedies These are the rules for the admission of articles for this book, New and Nonofficial Remedies

Mr Hough —But you read something that I do not see in my book Accepted or what? *A* —Accepted or retained

Mr Hough —That is new I guess 'or retained" is new

The Witness —Have you 1916?

Mr Hough —1914

The Witness —It is 1916 that I am reading There may be slight changes in the rule—

Mr Hough —The rules change every year?

The Witness —There may be slight changes in the rules from year to year yes sir (Reading)

But this rule shall not apply (a) to disinfectants germicides and antiseptics provided that the advertising be limited to conservative recommendations for their use as prophylactic applications to superficial cuts and abrasions of the skin and to the mucous surfaces of the mouth pharynx and nose (but not to those of the eye and the gastro-intestinal and genito-urinary tracts) and provided they are not advertised as curative agents. (See Comments to Rule 3) and (b) to nonmedicinal food preparations, except when advertised in an objectionable manner '

Then the explanation of these rules state as follows 'Rule 3 Direct Advertising

Mr Hough —Pardon the interruption Is this part taken out, (c) and circulars when distributed solely to physicians

The Witness —Yes sir that has been taken out. The part I am coming to now is on page 17

'The impossibility of controlling the irresponsible claims which are usually made in advertisements to the public, the well known dangers of suggesting by description of symptoms to the minds of the people that they are suffering from the many diseases described the dangers of the unconscious and innocent formation of the drug habit and the evils of harmful self medication including the dangers of the spread of many infections and contagious diseases when hidden from the physician and similar well known considerations are the reasons for discouraging in the interest and for the safety of the public, *this* reprehensible form of exploitation Advertising in medical journals etc. distributed solely to physicians does not come within the scope of this rule.

In the case of subjects on which the public should be instructed as the use of disinfectants, germicides, antiseptics and foods advertisements to the public, if not in objectionable forms, are considered admissible. In no case shall such advertisements include recommendations for use as curative agents nor shall the names of any diseases be mentioned in exploitation If the preparation is sufficiently toxic to require caution in its use to prevent poisoning this fact shall be stated on the label

The Witness —The next part is a minor explanation which I do not know whether it is desired to read down to the bottom of the page, the third line from the end I will be glad to read it if it is desired

Mr T J Scofield —Yes, go ahead I want it in the record.

The Witness —(Reading) On account of the deplorable results which follow any abuse of this privilege, the conscientious cooperation of manufacturers and their agents in adhering strictly to the limitations laid down is asked and for the same reason the acceptance of an article which is so advertised as to infringe on these limitations in any essential way (as by naming diseases or by making false and exaggerated claims) shall be summarily rescinded and the reasons for such action may be published without notice to manufacturers or agents.

A disinfectant, germicide or antiseptic, will be accepted for description in New and Nonofficial Remedies and an article of this class which has already been accepted will continue to be included with New and Nonofficial Remedies only on the explicit understanding by the manufacturer and agent that such infringements of the rule will be followed by deletion of the article and by publication of the facts as described

The Witness —Shall I continue?

Mr T J Scofield —Yes

The Witness —(Reading)

We may divide the foods into three groups. The first group contains the ordinary groups including the well known breakfast foods These do not come under the supervision of the Council in any way

The second group includes a large and important class of manufactured products, such as invalid and infant foods, which in a sense stand between the first and third groups The public has the same interest in these foods that the physician has, and usually is supplied with full information concerning them. While the primary recommendation of these articles should naturally come from the physician it cannot be expected that their continued use should depend on repeated prescriptions. Information concerning this group of foods would come naturally and properly from a physician, and the collection and dissemination of this information may very properly be included in the work of this council

As the products in this case are used extensively, it is not proper to limit their advertising to medical journals, but the advertising should be permitted in the lay press so long as it is conducted in a manner compatible with the rules of the Council

The third group includes medicinal foods proper, such as predigested foods These have a relatively low food value and are characterized by a high alcohol or preservative content They frequently contain strictly medicinal substances or food substances for which distinct therapeutic properties are claimed These products should be used only on the advice of the physician, and the advertisements should be restricted as in the case of ordinary medicines'

Mr T J Scofield —Now then, Doctor let me ask you whether or not those are rules which relate to the admission of medicines in what you call the New and Nonofficial Remedies? *A* —That was a rule and its explanation, and the book relates to that. Yes the book relates to the admission—

Q —First, if any person has a proprietary medicine and desires to introduce it or get it into that book he submits his medicine for examination and if it is right it goes into that book is that right? *A —That is the idea exactly*

Q —Now doctor I will ask you whether or not physicians are opposed to patent medicine ?

The Court —Is this his opinion you are asking for now or do you want him to tell you that as a fact?

Mr T J Scofield —I am asking for his opinion whether in his opinion physicians are or are not opposed to the use of patent medicines ? *A* —The answer must take into account whether you mean by 'patent medicines' what the words should mean patented medicines medicines on which a patent has been granted by the government of this or a foreign country In that sense it is very clear that the medical profession is in no sense opposed to them because of the extensive use of such patent preparations or patented preparations as aspirin salvarsan sulphonal atophan, and a very large number of patented articles which will be found and a considerable proportion of which are very extensively prescribed

Q —That is true of adrenalin isn t it? *A* —Adrenalin belongs to that class yes. If on the other hand you mean by patent medicine what most people mean by it, a medicine that is generally not at all patented but a secret medicine that is advertised directly to the public then I should say that the medical profession as far as I know its sentiments is opposed to the methods by which those medicines are brought on the market and brought into the hands of the consumer They are opposed to the 'patent medicine exploitation but not necessarily primarily to the patent medicine' proper

Mr T J Scofield —I think that is all doctor

Whereupon the further hearing of said cause was adjourned to 10 o'clock the following day, May 10, 1915

May 10, 1916, Morning

TESTIMONY OF DR T SOLLMANN (*continued*)

Dr Sollmann resumed the stand for the defendants

CROSS-EXAMINATION BY MR. HOUGH

Q —Doctor as I understand you have never been in active practice? *A* —No I never have.

Q —Your work has been confined entirely to experimental work? *A* —Well in a sense yes Of course I have watched the treatment of patients in the hospitals I visit the hospitals and am consulted there about treatment and watch the results of the treatment.

Q —You say you have been a member of the Council ever since it was formed how long has it been in existence? *A* —About 11 years I think it was founded in 1905 if I am not mistaken it was in February 1905 that it was founded I think I am correct about *that*

Q —How many members has the Council? *A* —It has 15 members with the secretary that makes 16 in a sense.

Q —Does that include the corresponding members? *A* —No it does not include the corresponding members no

Q —How many corresponding members have they? *A* —There are three I believe

Q —When did you first commence to publish New and Nonofficial Remedies? *A* —I think Mr Hough *that* was about two years after the foundation of the Council

Q —About 1907? *A* —I think so I might be mistaken, but that is my recollection

Q —Who appoints the members of the Council of Chemistry and Pharmacy? *A* —The members of the Council are elected or appointed by the trustees of the American Medical Association

Q —That is controlled by the trustees? *A*.—It is controlled by the trustees, yes sir

PHARMACOPEIA COMMITTEE

Q —You are a member also of the United *States Pharmacopeia* Committee? *A* —I am yes sir

Q —Are you one of the trustees of the Pharmacopeia? *A* —No

Q —Has there *not* been a controversy going on between the Council of Chemistry and Pharmacy and the Pharmacopeial body? *A* —No not as bodies Of course, individual members of any two bodies may have had a difference *in* their opinions on certain special questions but there has been so far as I know no controversy between the two bodies whatsoever They have no relation to each other and there is no occasion for controversy

Q —Well the members of the Pharmacopeial Revision Committee are not confined to members of the American Medical Association are they? *A* —By no means

Q—It represents the entire field of medicine, pharmacists, doctors, chemists and pharmacologists Is there any other classification except those, would you say? *A*—I should think they would practically come in They are elected from delegates that are sent by the medical bodies, various medical *organizations and medical associations*, pharmaceutical bodies and pharmaceutical associations and by the Government Medical Services and I think the Department of Agriculture also has representatives and the pharmaceutical schools

Q—That is, the Public Health Department of the Government and the Department of Agriculture both are represented in that body? *A*—Yes, sir, and the Army and Navy Departments I think They are elected, a body of delegates Each organization that sends delegates are entitled to three delegates and those delegates vote and elect out of their number without any direct reference to chemists or pharmacists and so forth, a certain number of delegates I ought to qualify that a little, because in the last pharmacopeia convention, there was a distinction made between *pharmaceutical elections and medical elections* It was agreed that a certain number of the new Revision Committee—it was a new departure, the Revision Committee of fifty—it was a new departure, and in order to simplify matters it was agreed there that I think 35 of those should be elected by the representatives of pharmaceutical *organizations and* 15 *by representatives of medical organizations*, or some such number I think it was 35 and 15

Q—When was the last Pharmacopeial Convention? *A*—That was in 1910

Q—They meet every ten years and revise the Pharmacopeia, don't they? *A*—Yes

Q—And then the Revision Committee is elected and the Committee works for five or six years before they finish the work? *A*—This time it is nearly six years

Q—Your new Pharmacopeia is almost finished now, is it not? *A*—It is going through the press, yes

Q—And in that all branches have participated, whereas in the New *and Nonofficial Remedy list, only the American Medical Association* appointees participate? *A*—Yes, sir Of course the medical and pharmaceutical professions and the chemists are represented on the Council still but they are, as I say, appointed directly by the American Medical Association for a particular purpose and the others are elected at large

Q—Now, about five or six years ago, the American Medical Association made an effort to get *control* of the Pharmacopeia exclusively, didn't they? *A*—No, Mr Hough

Q—You don't know anything about it? *A*—I know a great deal about what took place at that time, but I do not know of any such attempt at all

Q—What do you know about any effort of that character? *A*—There was a question at that time to a considerable extent with the opening up of the new Pharmacopeia, this decennial revision—that it would be advisable perhaps to restrict the scope of the pharmacopeia Certain people had that opinion, and other people had an opinion in the opposite direction

The American Medical Association*, as such, I think, took no part* in it at all The matters were discussed Those two policies were discussed but not at all Mr Hough, with the idea of getting hold of the Convention or putting it in the hands of the American Medical Association That I have never heard discussed even or even the idea of it

The scope of the pharmacopeia has been discussed in The Journal but all the suggestions that are made did not in the slightest degree contemplate a control of the Revision Committee by the American Medical Association I never heard a suggestion that the delegates should be elected in any other way *than the way that* has been customary

Q—How many drugs were in the last Revision of the Pharmacopeia? *A*—I happen to remember that there are 890 or 980 titles I have a memorandum, if you wish the exact number

Q—That is sufficient *A*—Something like that

Q—The American Medical Association representatives on the Pharmacopeial Board at the last Revision attempted to cut those down to *44 drugs, didn't they? A*—Oh, no, Mr Hough

Mr T J Scofield—Doctor, speak louder and more distinctly, please

A—No, not at all Never dreamed of such a thing In the first place—

Mr Hough Q—Did they ever *attempt to* cut them down at all? *A*—I don't remember who the American Medical Association's representatives officially there were I was not one of them I was a delegate from the Ohio State Medical Association But such an idea of cutting down the number of drugs in the pharmacopeia to 44, has never to my knowledge been advanced by anybody except *as* a straw man that was set up as something to be knocked down No one on the side *of the medical* profession that I know of has ever suggested any such absurd thing

Q—Didn't such an article appear in The Journal itself? *A*—Not to my knowledge, and I read The Journal pretty carefully

Q—Well, you say the suggestion was made by somebody, but you don't believe it was *anyone* from the American Medical Association? *A*—I do not know, Mr Hough, that it has ever been made or advanced *from any* responsible quarter I am simply taking your *statement* that it has been made If it has been made, it must have been *made* the way that I said I personally never heard of it

Q—You personally knew nothing about it? *A*—No

Q—Now, the significance of a drug appearing in the pharmacopeia is that it is being generally used by physicians, isn't it? *A*—Not necessarily, Mr Hough

Q—Not what? *A*—Not necessarily You mean, of the past pharmacopeia, or of the coming pharmacopeias?

Q—The past pharmacopeias *A*—In the past pharmacopeias I have not been directly concerned in their revision This was the first time I was a delegate and what *may* have been in the minds of the delegates to the previous convention of course I cannot speak of at first hand I have never taken it that all the drugs that appear in the pharmacopeia are used extensively or at all, even by physicians There are a number of drugs in the pharmacopeia that are put in there simply as reagents and again a number of things that are *put in there* for making pharmaceutical preparations

Q—I am talking about those things that are in the pharmacopeia that are to be prescribed in sickness, as distinguished from any reagents or chemicals, or chemical methods concerning the mixture of preparations of drugs *A*—Yes, I just wanted to get that clearly I should say that that was the intention of the people that *put them in*, naturally that is what they would naturally have in their minds

Q—*Viburnum prunifolium* is contained in the present revision, is it not? *A*—Yes, viburnum prunifolium is contained in the present revision Now I can tell you what the intentions were of the present revision committee as to these matters, from my personal knowledge

Q—I am only asking you if it is contained there *A*—It is contained there, yes

Q—And they have taken out the requirement in the old pharmacopeia that it is the bark of the root *Now, it is just the bark*, any part of the bark, isn't it? *A*—That I do not know, Mr Hough, at all

Q—Well you have seen it, the sheets are sent to you are they not? *A*—I have seen the sheets, but I certainly have not noticed that.

Q—You have not noticed that? *A*—No If that is there, I don't know *it at all It slipped by me, if it is there*

EARLY USE OF DRUGS

Q—How did medicines come to be used in the beginning? *A*—How did they come to be used in the beginning?

Q—*Yes* Was it not the result of home treatments, people in the country used weeds and herbs for certain conditions? *A*—Of course I cannot give you any definite knowledge about those back times I can only reason from what the probabilities are.

Q—I mean, from your reading? *A*—From the probabilities of what happened in the prehistoric times

Q—You know about Hippocrates? *A*—Well, I guess they were used before Hippocrates *no* doubt.

Q—Coming down to this country, viburnum prunifolium was introduced first as having been used *in* families in the country going out and getting the bark of a tree? *A*—That is the way I think in which it came to their attention

Q—And after extensive use that way, *it was taken* up by physicians, wasn't it? *A*—Of course I do not know how extensive the use was Mr Hough

Q—You do not know how extensively families used it at first? *A*—No, it might have been used in just one locality, one man might have heard about *it I don't know* It might have been used very extensively I have never heard a statement of that

Q—And your reading of the history of medication and drugs don't tell you anything about it? *A*—About what, viburnum?

Q—Yes, about how it was introduced in medicine *A*—Oh, yes, *I* have read the history of it

Q—Well, that was the way it was introduced, was it not? *A*—The first mention I saw of it in the literature, was in the year 1850 or thereabouts

Mr T J Scofield—A little louder, doctor

A—Was in the year 1850 or thereabouts, where, in a work on plants *I believe—it is a little hazy in my mind—there occurs* a statement that *it is used in domestic practice, I mean in* families Then that I think did not obtain any great notoriety Then there were—oh, a matter of four papers in the next 15 years and then a paper by Phares, I believe That was rejected, but he, however, states that it was introduced in that way that he learned of it through its being used in *families around in families where he was practicing*, some village in Mississippi if I am not mistaken

Then afterwards, for ten years, nothing further appeared about it, and then there came a group of papers. That is what I gathered from my reading as to the history of its introduction

Q—*Carduus benedictus* was introduced into the practice of *medicine in the same way, was it not? A*—I should imagine in some such way The history goes back to a time when there is not any literature

Dr Sollmann was then questioned in detail concerning the literature on carduus benedictus The first mention of it which he had found in connection with uterine diseases was that of Cooper in 1849 He did not remember reading Schroeder in 1693 He did read Sammon's "Herbal" in 1711 Out of forty-eight papers read since 1650, he found reference to uterine diseases in four

He testified that both carduus benedictus and viburnum prunifolium are used as a tea

Q—That is, the virtues of the drug were extracted by *the water*? *A*—Whatever virtues there were, if any

Q—And therefore water would *extract* all the virtues which viburnum prunifolium originally was supposed to possess? *A*—If it possessed any such virtues, the use of hot water, the *hot tea*, would extract them

Q—Then does the addition of alcohol help the extraction in any way? *A*—Of what, Mr *Hough?*

Q—Of the extractives of any herb, such as carduus benedictus *or viburnum prunifolium? A*—It all depends upon what the active constituents, if any, are

Q—Without reference to what they are, starting with the proposition that water alone extracts all that was originally known as medicinal, does the addition of any alcohol assist the action of the water *in that extraction? A*—You ask me there to make an assumption that I have *not* granted, that there was any activity *known* to be present in the drug originally I would be prepared to deny that, so I don't believe I could answer the hypothesis in the way you put it

Q—Whatever reputation those drugs had before they got into the pharmacopeias was due to the extractive matter brought out by the use of water alone wasn't it? *A*—No I don't believe so I would not be sure of that point, and I do not think that the drug got into the pharmacopeia until the year 1880 and I don't believe it was used exclusively by the physicians who reported upon it previous to that time, in the form of infusions or decoctions I would not be absolutely sure.

Q—I am not talking about its exclusive use by physicians I am talking about its home use which preceded its use by physicians country use? *A*—I misunderstood it then Will you repeat your question?

Q—You said it was not used exclusively by physicians in the form of a tea at the time it went into the pharmacopeia in 1880? *A*—So I believe

Q—I supposed some of them used it in the form of a tea? *A*—I believe under certain conditions at least they did

Q—But the reputation of the drug was established as an infusion of that character in its use by the women of the country before the doctors took it up at all? *A*—I do not know Mr Hough whether the reputation of it is established now and I do not think it susceptible—

Q—I am talking about whatever reputation it had at the time it first went into the pharmacopeia It must have had a reputation or it would not have gotten into the pharmacopeia isn't that true? *A*—Yes sir that is true.

Q—Now that reputation was based originally on its use in the homes of people who lived out in the country? *A*—I would not say that.

Q—Would you say it was not? *A*—That undoubtedly started physicians to trying it. There are a good many things that are used in the homes of the people that are not effective some are and some are not.

Q—Then when the physicians commenced to use it, they would first use it in the way it was being used in the homes of the country and then they might vary the use, might they not? *A*—Not necessarily Mr Hough

Q—Well whatever reputation it had prior to the time it went into the pharmacopeia as a pharmacopeial drug was based upon the extractive matters which were taken out with water? *A*—I do not know that the matter is important but I do not think I can grant that premise at all. It does not seem at all a *logical sequence*.

Q—I don't want you to grant any premise at all I want you to tell what you know as a fact, and what your judgment is from your reading and what you believe is true. *A*—I stated, I think that I did not know exactly the form it was first used in by physicians. However to cover it I wish to make myself clear

The Court—Let me ask you Dr Sollmann if the benefits from this herb were first discovered by women may we not assume that they probably extracted whatever of the active principle they got out of it, with hot water and cold water and not by the use of alcohol? *A*—So far as the use by women is concerned I think that is absolutely true, but I do not think that it necessarily follows that physicians also tried to extract the principles in the same way

The Court—Well assume that for a moment. Now if we assume that as true how much of the active principle would you get out by the use of alcohol how much more? I think that is what your question includes? *A*—Is that the tendency of it? Well since I do not know Mr Hough what the active principle is I cannot answer that question.

DRUGS IN PHARMACOPEIA

Mr Hough *Q*—Now the pharmacopeia is full of drugs of which the active principle is not known isn't it? *A*—Oh yes Not full of them by any means

Q—I don't mean that literally *A*—I took that question in the way I understood you to intend it It contains such drugs

Q—And a large number of them? *A*—Well I would not say what proportion It contains some. I could very easily agree to that but I would not say offhand how large a proportion

Q—And drugs appearing in the pharmacopeia have been used for years without knowing how the action which is supposed to be brought about, is brought about, haven't they? *A*—Oh a good many drugs have been continued that way for a long time.

Q—And that is not a reflection on the drug that the method of its action is obscure is it? That is if you do not know how it acts? You do not know how it brings the results, which are attributed to it That is not a reflection on the drug is it? *A*—Well, I would not say that it is a reflection on the drug, exactly but it is a reflection on its use to a considerable extent

Q—It is a reflection on its use? *A*—Yes

Q—Then why did you put into the New and Nonofficial Remedies stypticin with the statement that its method of action is obscure? *A*—Yes.

Q—I say why did you put it in if it is—if it should not be there? *A*—I did not say that no drug should be used unless the method of action is known I said it reflects upon the—

Q—Upon the use of it? *A*—That is upon the use.

Q—But when you put a drug in this it is an invitation to a doctor to use that drug isn't it? *A*—It says that so far as the Council can ascertain that sort of a drug is perhaps worth trying

Q—It is an invitation to use it, isn't it? *A*—I would not put it in just those words

Q—Then of course it cannot be any reflection upon anyone who does use it without knowing how it acts? *A*—I would not say it was a reflection upon anyone who uses it but I think if he knew how a thing acted he would prefer that and he should always be trying to find out how this does act.

Q—Now the practice of medicine has been carried on for a long time before physicians knew just how the drugs did bring about the results which they were supposed to bring about That is a fact isn't it? *A*—In a sort of a general way it is The physician will use the best means he can He does not always choose to use those means but if nothing better is available he will use those means He will try to find out how the drugs act They have been trying to find out in a way since they began to use drugs, and have formed various ideas about it but they did not have the means for finding out and as soon as the means were furnished by the progress of science they at once turned to them to try to find out

Q—They did not then prescribe the drugs they had been working on or cease to prescribe them because they could not find out how they acted? *A*—Not unless they found one that they could find out how it acted

Q—In other words they might get a substitute and they preferred to use something that they knew how it acted rather than to use something that they knew did act though they did not know how it acted? *A*—I think in a general way I might agree to that. Of course it is rather an involved general statement but I think I can agree to that

Q—You understand what I mean by the question, didn't you? *A*—I think so

Q—How many of the drugs that are in the United States Pharmacopeia have been proved pharmacologically? *A*—I never figured that out Mr Hough

Q—Ten per cent, would you say? *A*—Oh, the majority of them I should say but that is an offhand statement. A considerable majority of them

Q—Do you think more than half have been proven? *A*—I think so yes

Q—Is there any list anywhere published of the drugs which have been proven pharmacologically? *A*—Not that I know of except, of course all sorts of books on pharmacology which will give information as to what has been done on the subject If work has been done on it and that has led to any results so one could check it up—but I have not got it in my mind

Q—Do you now regard pharmacology as an exact science? *A*—Exact is rather a relative term in human affairs

Q—I did not hear you *A*—Exact is a relative term in human affairs

Q—A relative term? *A*—Yes. A thing that is exact in one connection is not exact in another If you are weighing a ton of coal a pound or two makes no difference It is still exact. If you are weighing a diamond a pound or two would make a fundamental difference it would not be exact at all It is all relative so it is a very hard question to answer

Q—Well in that sense or in either sense would you say that pharmacology was an exact science? *A*—I don't believe I could *answer that* question as a broad proposition

Q—Well like mathematics say? *A*—Oh, no, it is not like mathematics.

Q—There are still many sources of error in it are there not? *A*—Well it is susceptible to improvement yes Mr Hough

Q—What is that? *A*—It is susceptible to improvement like all biological science.

Q—And proof by whatever method you achieve or establish that a drug acts upon a lower animal would be reasonable proof that it acts in some way upon the human being That is one of the fundamental principles of the science is it not? *A*—That if it has some action on lower animals that it will have some action on human beings I should state that as a broad proposition yes

Q—Would you state that the negative or reverse of that is also true without qualification? *A*—That is to say that if a drug has no action of any kind on a lower animal—

Q—No action which you discovered by your tests? *A*—Yes Or any action that can be discovered by the methods of pharmacology elaborated up to the point where they are elaborated now, I suppose you wish me to assume?

Q—Yes *A*—That where no action can be discovered that way it still could have an action on a human being?

Q—It still could have? *A*—I mean is that your question?

Q—Yes I asked that question *A*—I should say only through the imagination

Q—What is that? *A*—Only through the imagination I think. I could say that I think without further qualification

Q—Did you test cactus pharmacologically? *A*—Personally?

Q—Or with any assistants? *A*—No

Q—Or did you participate in such a test? *A*—No

CACTUS

Q—Well cactus was determined pharmacologically by your Society or your Council as possessed of no therapeutic value whatever was it not? *A*—That was the conclusion yes

Q—And an article to that effect was published in The Journal was it not? *A*—I think there were several articles to that effect published in The Journal if I recollect.

Q—And an investigation of its use among physicians showed after that time that it was used more than any other drug in their armamentarium *A*—Not to my knowledge, no

Q—Do you know anything about any investigation of that character? *A*—I don't think so Mr Hough.

Q—What is that? *A*—I don't think so it does not occur to me now

Q—Then do you know that after you decided here that it had no therapeutic action under your pharmacologic tests it was demonstrated in the pharmacologic institute of Berlin by Dr Grever that it had therapeutic action? *A*—No I don't *think so* Mr Hough

Q—You don't think so? *A*—I don't think so

Q—You don't think what? *A*—That it was demonstrated there that it had a therapeutic action.

Q —Do you know the *experiments that were made?* *A* —I think I know the experiments to which you refer Well, I read a paper—I don't remember whether I read it in the original or in the abstract when it was published, and that must have been some four or five years ago, *and I have not read it since, so I do not know how accurate my recollection of the details of that paper may be* The recollection—

Q —Whether you agreed with the conclusions or not, it was reported at that Pharmacologic Institute that it had been determined there that cactus did possess therapeutic action That was the effect and substance of that paper and report, was it not? *A* —No, I would not say that

Q —Well, what was it? *A* —*My recollection of the general conclusion* was that when used in large doses the particular drug that they were working with (which may or may not have been cactus)—

Q —Which may or may not have been cactus? *A* —Yes, sir, that is what I said

Q —Well, *it may or may not have been cactus that you used here* *A* —No, that was cactus That was identified by competent botanists of the United States of the Smithsonian Institution, I believe it was, but the doubt on that subject is a very serious one, because there has been a great deal of confusion in the botany of cactus, a very great deal, and no work on cactus would deserve any consideration unless the species was definitely *identified as the one that is supposed to be* used in medicine

Q —Was that not definitely identified as cereus grandiflorous in that Berlin experiment? *A* —Not that I recall

Q —Have you any reason to believe that in Berlin they would not be as accurate on that subject as in this country in the Pharmacologic Institute of Berlin? *A* —That *might easily be the case* *There could not* have been the great confusion that exists in that as we know it over here where the product has been more extensively employed

Q —All you now say is that you disagree with the conclusion or you don't remember— *A* —Oh, yes, I recall the work It did not say that the drug had any therapeutic usefulness directly That question was not touched in that piece of work at all

Q —*Did it say that it had any action on the lower animals?* *A* —In very large doses it did produce a result on the animals but as I explained yesterday, that does not necessarily signify that the drug has any therapeutic usefulness

Q —But it does show that it does have some action on the human being? *A* —If used in adequate doses and so forth If I recall the papers that were published on the cactus, on the part of the Council, they also I believe showed that if you used enormous doses you got some sort of an effect My recollection on that is not clear, but that is my general recollection

Q —Is not this what The Journal of the American Medical Association said— A —I could not identify it, but if you have The Journal there and read it, then it is what it said, but I could not from my recollection of several years ago say whether what you read is what it said

Q —Do you recall that they said that it was absolutely inert on animals when used in a thousand times the amount of the dose on a human? *A* —I don't recall, but that very likely is what they did say, I don't know

DR SOLLMANN S BOOK

Q —Doctor in view of what you have testified to about the accuracy of deductions based on experiments on animals what did you mean in your book, 1914 edition, under the head of 'Effect of Drugs in Disease" when you said, "Animal experiments are of but limited value in this connection" *A* —If you will read the *remainder*—

Q —(*Reading*) "And we are forced to rely mainly on observation of *patients*"

Mr T J Scofield —What page is that?

Mr Hough —That is page 125

The Witness —If you will read that whole paragraph it will explain itself I will try to give you an offhand explanation It was written ten years ago, and agrees *exactly with* what I said *yesterday*

Q —Is it a fact that animal experiments are of but *limited value in* establishing the effect of drugs in disease? *A* —That is what I said yesterday, too, Mr Hough That the effects in disease, as distinguished from the action, as I explained yesterday (drawing that distinction) might be different, and that would have to be determined by the direct trial, and that is why one could not tell from the fact that a drug *had an effect on animals,* that it would be a useful drug I thought I explained that.

Q —You testified yesterday that the action of drugs is the same, but the effect may be different? *A* —Yes

Q —Well, now, you state in your book "The action of drugs is not the same in *health and disease*" *A* —Exactly It does not contradict it strange as it may seem, and if you read that whole paragraph, it explains itself as showing that here *I used the term "action"* rather loosely, which one often does One often says that a drug has such and such an effect of course, and the drug has no effect It has an action and that action produces an effect Vice versa if one is not trying to draw the distinction between the two things, one often says "action" when one means "effect" If you will read this paragraph all the way *through* it will show I happened to look it up last night.

Mr T J Scofield —Doctor, here is your book Read the paragraph

Mr Hough —Just let me *finish*

Mr Walker —You have not any right to take the witness now We have got the witness

Mr T J Scofield —I have got the witness long enough to see that you don't—

Mr Hough *Q* —You said *yesterday that* the action of the drug was the same, didn't you? *A* —I said that the action of the drugs were the same

Q —Now, in your book there you say that the action of drugs is not always the same in disease, as in health? *A* —Yes, and you are quibbling about a word there, Mr Hough, which is fully explained in the context It is the way in which a word is used One can use the same word in different ways

Q —You mean when you testified on the stand, *you meant* the effect, and when you wrote the book, you meant the action? *A* —When I wrote the book here, I meant the effect in the sense in which I explained it yesterday I was not trying there to make a specific difference between the action and the effect, I was not trying to make that difference clear, and that paragraph explains itself, if you will read the whole paragraph, and the one following it

Q —I will *read further from the paragraph* *A* —You should begin at the beginning if you wish to get the meaning of that paragraph, and not begin in the middle

Q —I am going to read the next following paragraph What I have just read is the first paragraph under the heading, "Effect of Drugs in Disease" *A* —As it says—

Q —The next paragraph says, 'The differences are, however, as a rule quantitative rather than qualitative" *A* —Yes

Q —(Reading) "Since drugs are in practice employed most extensively in disease, their action under those *conditions is of the greatest* importance As a general rule it is possible to explain and even predict the action of drugs in disease from their action on normal tissues. However, the actual test must always be made Animal experiments *are of but limited value in this connection and* we are forced to rely mainly on observation of patients" *A* —Yes, *of* course, that is self evident, the reason for that If we are going to see the effect of a drug in a disease, we must have that particular disease before us

Mr T J Scofield —Read further there, read the whole paragraph, go right on

Mr Hough *Q* —*You say this* was written ten years ago? *A* —That was written ten years ago

Q —In your preface, don't you say that this has all been rewritten? *A* —Ten years ago it was rewritten

Q —In the *1914* edition, don't it say it has all been rewritten for the *1914 edition?* *A* —*That* title page there was *absolutely* a complete surprise to me I *may state as a matter of fact,* that this book has *not been revised or rewritten, or to my knowledge altered except that* title page, since the year *1906* When I started to revise it I found that the subject at that time had so much advanced that I could more easily write an entirely new book, which is now in press, than to revise this That is the reason why there has been no revision since that time and this title page was put in there without my consent, and even without my knowledge, and when I saw it here a *few* weeks ago, it was a complete surprise to me

Q —Well, doctor, your book has a number of other mistakes in it Have you discovered them in the new edition you are now working on? Have you discovered that there are a number of other mistakes in the 1914 edition? *A* —I should not be *surprised* but what there would be quite a number of mistakes, but as I say—

Q —I can hardly hear you If you please, will you sit further out *A* —I cannot move the chair, Mr Hough, it is nailed down

Q —Well, I will *move forward then* *A* —I rewrote it, and therefore, I would not be able to tell you whether I have corrected the particular *mistakes* that I made in this, or did not, I hope *so*

Q —Who wrote the statement that it had been thoroughly revised, and entirely rewritten for the 1914 edition? *A* —No, sir, I did not

Q —*Who did state that in your book?* *A* —*That is the preface* of the edition of 1906, Mr Hough

Q —And it don't refer to 1914? *A* —No, it does not

Q —Well, what about the young doctors who have been misled by these things in the book? They are misled, are they not? *A* —They have not been misled by my fault, Mr Hough

The Court —*It is perfectly obvious* that they will have to take their chances.

The Witness —It is very strange what liberties publishers will occasionally take

Mr Hough *Q* —You mean, that was put *in by the publisher,* and not written by you? *A* —No That was put in by the publisher without ever consulting me, or telling me about it even Of course the preface I put in in *1906*

Q —Not rewritten, but in writing this new book you say you have rewritten this all again? *A* —Yes, sir

Q —Well, in doing that, did you find that in a number of places you had *misquoted* the pharmacopeia? *A* —I do not recall except one instance of that, and then it was not a quotation of the pharmacopeia, it was a synonym that got confused I will be glad to have you call my attention to it

Q —I have a memorandum of it *A* —I will be glad to have it, and I *will be sure to* check them up

Q —Yes, I think that is important

Mr Walker —Yes, help along the new edition

The Witness —Of course that might not apply, because that pharmacopeia *will be out of print when the* book gets published, I hope so, at least. *Did you* say I misquoted the pharmacopeia, did I understand you correctly?

Q —I beg pardon? *A* —Did you say I misquoted the pharmacopeia?

Q —Yes, in the origin of plants, and in the percentages, the amount

A —I would like to see that

Q —Well, for instance, *on page* 103 if you have your book Would you like to look at the book, while we go over *the mistakes?*

The Court —Mr Hough, is the book on trial here?

Mr Hough —No, but the witness' accuracy is

The Court —He admits that he has made some mistakes in the book

Mr Hough *Q* —Doctor, in these pharmacologic tests which you made, the greatest accuracy is required, isn't it? *A* —The greatest that is obtainable, Mr Hough

Q —And if you make a little mistake, even of a small percentage or the fraction of 1 *per cent* in one case, it may make a totally different result may it not? *A*—Oh no that all depends It is the same story again as with the ton of coal and the carat of diamonds Sometimes the fraction of a per cent. makes absolutely no difference and in another case it may make an enormous difference just as with the diamond and the coal

Mr Hough—I am willing to give the witness the benefit of the memorandum of mistakes that I have found if he wants them

The Witness—I do not happen to see any pharmacological quotation—any pharmacopeial quotation on page 103

The Court—You are testing the witness general knowledge He may have made a few mistakes in that book but he was asked certain things on his direct examination Now if he contradicts himself as to those the point is important or if he contradicts himself in the book. But this is on a subject that is not at all allied with the matter before us now, that we are investigating What difference does it make?

Mr Hough—Except to show the general method of work of the witness, who is testifying as to certain experiments which he has made which require the greatest accuracy

The Court—If you deem it important, I am not going to stop you but it seems to me that this Jury and the Court have a great deal to do besides that.

The Witness—In that connection may I remark that page 103 does not seem to me to contain any quotation from the pharmacopeia whatsoever so far as I can notice here and Mr Hough calls my attention to misquotations from the pharmacopeia

Mr Hough—That was the most insignificant one In there you gave the botanical source of cochineal as coccus cacti whereas the pharmacopeia gives it as false coccus cacti

The Witness—This is not intended to be a quotation from the pharmacopeia.

Q—That is what you have there? *A*—No sir Cochineal U S P—I stop there and make a dash and then give my own interpretation of what it is. It is not put in quotation marks and in no way is it a quotation. It is simply my statement in a brief form of what that is and if the rest of them are that way I would protest against their being called misquotations from the pharmacopeia

Q—You mean that you are making statements different from the pharmacopeia? *A*—I may easily make statements different from the pharmacopeia

Q—But when you are doing so after mentioning the pharmacopeia in such a connection that you would lead one to believe that that was in the pharmacopeia—

A—I think anyone who is familiar with these books the term 'U S.P put after the name means nothing more than that the drug is contained in the United States Pharmacopeia, and that is where that part of the information stops. Whenever I quote from the Pharmacopeia, I follow the words U S P in connection with that particular quotation. For instance when I say such and such a dose 'U S P

Q—Well without running through them all, will you look at page 330 colchici semen is given as 55 U S Pharmacopeia and you have it 45" instead of 55 *A*—That is in colchici semen?

Q—Yes? *A*—You say it is 45 instead of 55?

Q—Yes? *A*—That would be an error in that case.

DR. SOLLMANN'S EXPERIMENTS

Q—Well, I won t run through all of them. Now you made a test of Wine of Cardui on a dog in a saline solution? *A*—No I did not say that Mr Hough.

Q—What did you say? *A*—I made some tests on the uteri of guinea pigs and on the human uteri but I made no tests on dogs personally

Q—No tests on the live animal at all? *A*—None at all personally

Q—And the only tests you made were by putting strips of uteri in this solution? *A*—That was the extent of my personal experience, yes

Q—What was that test that had the straight line on? *A*—The wavy line you mean?

Q—Yes? *A*—That was on the human uterus, excised, human uterus.

Q—The excised human uterus? *A*—Yes.

Q—I thought you connected that with a dog? *A*—No I was asked a hypothetical question in which I was to assume certain other work that had been done beginning with excised uteri I believe, and leading up to animals, dogs—excised human uteri and, I believe a uterus in the living subject and I was asked to give an opinion on those experiments in connection with my own experiments as to whether the drugs would have an effect on the uteri movements or whatever it was

Q—When you put the strips of uterus in this saline solution you don t tie it to any string do you? *A*—Generally put a little hook, or hook a pin into it and tie it to a lever

Q—On a string? *A*—On a string

Q—And it runs into the solution? *A*—It runs into the solution yes

Q—And then you put in that solution a certain amount of the drug in this case Wine of Cardui? *A*—That was the idea yes

Q—Considering the amount of solution in which the amount of Wine of Cardui was put, and including the alcohol that was in the Wine of Cardui— *A*—Yes.

Q—the percentage of alcohol to the whole volume was about 2 per cent. was it not? *A*—No much less than that.

Q—Less than 2 per cent? *A*—I think so I think the strongest concentration I used in the case of Wine of Cardui was 1 to 30 so that would be only 3 per cent. of Wine of Cardui, and one fifth of that is alcohol, so it would be one fifth of—I must start again One fifth of 3 per cent that would be three fifths—six tenths of 1 per cent.

Q—Was that the experiment in which there was a depression which you thought was due to the alcohol? *A*—That was in the fluidextract of cnicus benedictus which contained a much higher alcoholic percentage of course.

Q—That was the case in which you said the alcohol was present in about 2 per cent? *A*—I think it came to something like 2 per cent

Q—And 2 per cent of alcohol in that saline solution had an effect on the uterus which was appreciable? *A*—Yes Coming to check up the subject it was 1 5 per cent but I consider that immaterial.

Q—So that if 20 per cent of alcohol was brought in contact with the human uterus, it would have a much more marked effect would it not? *A*—If it was left in contact with it Mr Hough it would have If the human uterus was placed in the same solution, in the salt solution where the alcohol would stay in contact with it Then it would have a marked effect

Q—Does the salt solution help the action of the alcohol? *A*—No

Q—Then if you put alcohol 20 per cent solution on the human uterus direct, without any saline solution the effect would be very much more marked? *A*—No not necessarily It all depends on whether it would stay there

Q—Whether it would stay there? *A*—Yes

Q—How long would it have to stay there? *A*—In the case of alcohol to get that depression it would probably require—to get a noticeable depression—something like several minutes probably

Q—Ten minutes? *A*—It might be less than that likely less than that I should say

Q—If it stayed there that long there would be a marked effect would there not? *A*—I think there would be a marked effect in that case yes, sir

Q—Now is it not a fact that there is a difference between the action of a drug on a diseased and a healthy uterus? *A*—I think not Mr Hough I think I stated—

Q—Did you ever experiment on a healthy uterus? *A*—On a healthy uterus?

Q—Yes *A*—Well I considered those uteri practically healthy

Q—You considered all of them so? *A*—I think so One of them was carcinomatous but the part of the tissue that we took, was of course not the carcinomatous tissue

Q—Well would it not make a difference how long it had been out of the human body? *A*—Not in the direction of the results. The direction of the results would be the same The extent of the results quantitatively will be a little different.

Q—How long would you say that the uterus remains alive after being taken out of the human body? *A*—If you place it on ice, and leave it on ice and then put it again in the warm solution—

Q—I did not hear that word *A*—If you place it on ice, so it does not putrefy if you keep it from putrefying and if you put it on ice then you can revive it by putting it in the warm solution after five or six days under favorable conditions

Q—Five or six days? *A*—Yes, sir five or six days.

Q—How long had each of these uteri been out of the body that you used? *A*—I think they had been out of the body several hours

Q—Several hours? *A*—Yes and one we might have used the next day I do not clearly recollect but I think these tests were made—I have made some other tests with other drugs so my recollection on that point is not clear but I think all of those were on the same day that they were removed

Q—Was that experiment made in Cleveland? *A*—Yes sir that experiment was made in Cleveland

Q—Or here? *A*—Cleveland

Q—How did you happen to get the strips did they take them out for the purpose of the experiments? *A*—Oh no Mr Hough

Mr T J Scofield—Speak out loud *A*—They did not of course

Mr Hough *Q*—They were going to take them out anyway? *A*—And the surgeon who took them out absolutely did not know that they were to be used afterward even. I got them from the pathologist

Q—Is it not an unusual thing to remove a uterus where there is merely a displacement? *A*—It depends on the extent of the displacement I would not be in a position to discuss the details of those clinical cases but I know that they were taken out for the good of the patient in the direct line of the surgical work. The way I got them is—after the uteri are taken out at the advice of the surgeon they are turned over to the pathologists for microscopical examination of the tissues and he takes out a small piece that he uses for that examination and the rest of it is ordinarily destroyed Now I asked the pathologist who goes to several of the hospitals for this material asked him instead of destroying what he did not need to put it on ice for us or bring it directly to the laboratory where we could work with it.

Q—Do you know whether there is anything in a saline solution such as you use which would interfere with the action of either carduus benedictus or viburnum prunifolium? *A*—No

Q—Do you mean that you do not know or that there would not be? *A*—There would not be

Q—You are positive of that? *A*—I feel positive of that Mr Hough

Q—Did you ever make any experiments to ascertain that fact? *A*—I have made numerous experiments with the different kinds of drugs and saline solutions of various kinds and all the drugs that could give an effect—that did give an effect in the intact animal also gave an effect of the same kind in the saline solution Therefore the saline solution had no essential effect—I might almost say no effect of any kind—on the character of response or on the presence or absence of response.

THERAPEUTIC INCOMPATIBILITY

Q—Well there is such a thing as therapeutic incompatibility isn t there? *A*—Oh yes

Q—And that means that one substance, drug or otherwise, might be mixed with another drug so as to absolutely neutralize the action of the other drug? That is a fact isn t it? *A*—Well, I don t know whether as a scientific general proposition I could exactly agree with that, but I think I can agree with what you mean by the proposition That is to say—

Q —In general? *A* —That most of the actions of the drug might be removed by another one It is hard to conceive of one drug absolutely removing every action of another drug, but for practical purposes I am willing to grant that you may make that assumption

SYNERGISM

Q —That is the basis of what you call synergistic action? *A* —Yes. Of course, as I explained yesterday, the extent of that is comparatively unknown, and one has no right to assume anything of that kind, unless it has been shown

Q —You mean about the synergistic action or the incompatibility? *A* —About what you call incompatibility there

Mr T J Scofield —Will you talk a little more distinctly, I want the jury and everybody to hear you

Mr Hough —Has there been any experimentation to determine the synergistic action of drugs? *A* —Oh, yes

Q —That is, more than has been carried on to determine the therapeutic incompatibility? *A* —You don't mean these particular two drugs You mean drugs in general?

Q —Yes *A* —Of course the experiments that were made along those lines were made so that they would show either synergistic or antagonistic action, what we call—well, never mind the term Of course they have been made so that they could show either—the direction of the same experiments would show either one I think on the whole, more instances have been found of the synergistic action than what you call therapeutic incompatibility

Q —Now, the synergistic action is best where the two drugs are generally indicated for substantially the same conditions Isn't that so? *A* —You mean, it is most pronounced, or you would employ it, or what do you mean, "it is best?"

Q —Well, most effective, or possibly most pronounced *A* —You are using the term synergistic action—or we are using it for producing an action greater than would be produced by either drug alone in the same direction

Q —The sum total of the two drugs *A* —Yes Of course the answer to that question follows from the question You may get a synergistic action of those two drugs that act in the same direction If they act in opposite directions, then of course you would not get a synergistic action

Q —It goes without saying that the two drugs should be indicated for the same condition *A* —Yes, sir

Q —And according to the writing on carduus benedictus in some of the authorities, they were indicated—carduus benedictus was said to be good for the same thing that viburnum prunifolium was good for? *A* —I don't believe I could agree to that With all my reading on the subject I have not found a very clear idea as to the exact condition for which either of those drugs were indicated, and therefore I could not say really whether they were indicated for the same condition

Q —Well, suppose we use words They were said to be good for menstrual disturbances Those words were used, were they not? *A* —Yes

Q —And said to be good for womb trouble Those words were used, were they not? *A* —Yes, sir Shall we start on one of these, or do you want to give me the whole list?

Q —I am talking about carduus benedictus *A* —Very well

Q —And it was good for inflammation of the womb? *A* —Yes, sir

Q —And it was good for—

Mr Walker —He answered with a nod

The Witness —Yes, sir

Mr Hough —So that in a general way and in that sense the literature recommends it for the same thing that the literature recommends viburnum prunifolium for, without reference to whether they have any action or not in your opinion, or in anybody's else opinion? *A* —Yes

Q —They do, don't they? *A* —I think we make some very broad assumptions in that, in assuming that they are recommended for the same thing They recommend it, you might just as well say—you might just as well say that a drug is recommended for a headache to illustrate and give you an example that is sufficiently broad

Q —Well, maybe I can make it plainer The same words are used in the book—

Mr T J Scofield —I did not understand that answer Please read it

(The answer was then read)

Mr T J Scofield —Now what else, let him finish

Mr Hough —That was not responsive anyway

The Court —Go ahead, Mr Hough

Mr Hough *Q* —The carduus benedictus, to go back to words again then, is used or recommended in books or said to be good in books, those books that you read, for menstrual disturbances of women? *A* —Yes

Q —And for womb troubles? *A* —Yes

Q —And viburnum prunifolium is said also to be good for those same things, isn't it? *A* —Yes, I assume that

Q —Now this synergistic action that I referred to would mean that when one was added to the other the combined effect was more than the addition of the co efficient would it not? *A* —I get the idea, yes

Q —That is true, isn't it? *A* —That is the definition

Q —That is what is meant by synergistic? *A* —I accept your definition I think it is a very good one

Q —Now that condition is usually true with reference to two drugs that are mentioned for the same thing You say of course they must be mentioned for the same thing? *A* —That have the same kind of action You are mentioning, for instance, the menstrual disorders. One thing may act on menstrual disorders using the broad term you are using, in the one direction and the other might act in an opposite direction Those two things would not be synergistic, they would be antagonistic

Q —You mean they produce the same results by different means, is that what you mean? *A* —No

Q —You mean that, to be synergistic, they must produce the same results by similar actions, similar properties? *A* —Something of that kind

Q —If they produce the same results, but by dissimilar action, you would say then it is not synergistic? *A* —They might still be synergistic in a sense It depends—it must be an action in the same direction, however, or it becomes, by your very definition, an antagonism.

Q —Now, have you ever made any experiments for the purpose of determining what would be the synergistic action of 6 grains of viburnum prunifolium to 30 grains of carduus benedictus to the fluidounce? *A* —Before you add something you must have something to add Now my experiments showed that you did not have any effect from the viburnum prunifolium, and you did not have any effect—

Q —So you have made no experiments of that kind? *A* —No

Q —Then that is all that is necessary Have you ever heard of any other experiment— *A* —May I explain why I did not make them, Mr Hough? May I explain why I did not make them?

Mr Hough —One moment Did I say 6 to 30?

The Reporter —Yes.

Mr Hough —Well, that should be 60

The Witness —All the same Now may I explain why I did not make them?

Q —Well, as you have not made them, that is all that is necessary Doctor, carduus benedictus is one of the highest priced drugs imported into this country, isn't it? *A* —Carduus benedictus?

Q —Yes, highest priced? *A* —Why not according to what I have been told about it, I do not have any direct personal knowledge of it.

Q —Haven't you read the report of the Department of Agriculture as to drugs, weeds and herbs, used in medicine? *A* —I read that quite a while ago

Q —Didn't that state that it was more expensive than digitalis? *A* —That I could not tell you, but that still would not make it one of the highest priced drugs imported into this country

Q —I don't mean highest priced drugs, I mean herbs, used as drugs *A* —Herbs used as drugs?

Q —Yes *A* —If you use the term "herb" technically, which comprises only relatively a small number of drugs, that may be true for all I know If you mean crude drugs, plant drugs, that certainly would not be true.

Q —It is more expensive than digitalis, which is fox glove, isn't it? *A* —I could not say whether it was or not It depends of course on the quality of the digitalis leaves. I know we have paid quite high prices for some good quality digitalis leaves, and I doubt very much whether the other would come within a small fraction of that price

EFFECTS ON ANIMALS AND MAN

Mr Hough —Doctor, how many drugs, if you know, have an important or positive effect on man, which do not have the same effect on animals? *A* —The same effect, Mr Hough? No, I would not say—I would not say off hand that there are any That is a pretty broad sort of question, without having any particular instance in mind

Q —Then let me put it more concretely Potassium iodid has no action on a dog? *A* —Oh, yes, it has, Mr Hough

Q —In what way given? *A* —Given in any shape or manner whatsoever

Q —Has that been tested on a dog? *A* —Yes

Q —In what way was it tested? *A* —It causes—for instance, I know—I made some experiments myself in that direction, and also experiments have been published a long time ago, when it is injected by stomach tube, it produces, in adequate doses, a pleural effusion That is accumulation of fluid in the pleural cavity, over the lungs That is one effect in particular that I know has been produced

Q —Well, that is used for gumma in men, is it not? *A* —Yes, for certain syphilitic lesions

Q —Now, does the experiment on the dog indicate such use on a man? *A* —I don't believe, Mr Hough, that you would simply, from watching that action, think of its—of using it in gumma on man But I believe that it tends to explain the mechanism of the action on man Do you wish some other instance of its action on animals, Mr Hough?

Q —Does that explain its effect on gumma? *A* —On gumma only?

Q —Yes *A* —I would not say off hand that the experiments that I have in mind explain it. They might have some bearing upon it. But they explain its therapeutic use, if you desire that

Q —Is it not a fact that rabbits may be fed for weeks on belladonna without showing any symptoms at all? *A* —No, I would not say that Mr Hough—without showing any symptoms at all

Q —What would you say on that? *A* —They would get a dilation of the—

Q —Let me put it this way—I withdraw that question How long may rabbits be fed on belladonna leaves without showing any symptoms? *A* —That depends upon the dosage, how much they would eat, etc

Q —Are you familiar with Cushny's statement on the subject? *A* —I may have read it a long time ago I have not read Cushny's book since—in general since a long time ago, and not on that subject, I know

Q —Is there anything in your book on the subject? *A* —There may be Not as you put the question, Mr Hough The statement, as I would think it was in my book—I have not looked it up recently—would be to the effect—at least that would be the intention of it though I don't recall the wording—that animals can be fed on bella donna—rabbits you are speaking of and, curiously, fed on belladonna leaves exclusively and raise litters of young even on that ordinarily poisonous diet, and yet remain alive It does not show—it does not mean that there is no effect upon them There is a quite distinct effect on them, and the reason why it has no effect is—I mean no fatal effect—is also quite interesting that is known to a certain extent that I could explain, if you desire.

Q—They use it as a food—the rabbits use it then as a food? *A*—You give it to them as a food and make them use it I don t think they would spontaneously use it that way

Q—Well do they object to using it as a food? *A*—According to my recollection I don t exactly know I suppose, since they can be kept alive on it they would have no very serious objection to it

Q—I mean they don t show aversion to it? *A*—I don t know, Mr Hough at first whether they do or not, but evidently, eventually they eat it.

Q—How much is the dose for man of belladonna leaves? *A*—Of belladonna leaves?

Q—Yes *A*—I could not give you that off hand, Mr Hough I should imagine possibly something like 2 or 3 grains.

Q—Is it not just 1 grain? *A*—It might be 1 grain Of course the dosage of those things varies to some extent. In some conditions you employ larger doses and in some smaller But it might be very well 1 grain—

Q—That is the average dose given in the pharmacopeia is it not? *A*—I don t remember but if you state so, I will very willingly accept your statement

Q—Speaking of the pharmacopeia when the pharmacopeia—when the Pure Food Law was passed there had to be a number of changes in the pharmacopeia didn t there? *A*—I don t know about that Mr Hough whether there had to be any changes in it or not. That was before the time that I was connected with the pharmacopeia, I think—

Q—Well but— *A*—In any way

Q—Haven t you a copy of the revised edition of 1907? *A*—Yes Now, when you mention it, I believe there had to be some little corrections with a book of that size—

Q—Well there were more than 150 changes that had to be made in the pharmacopeia? *A*—That Mr Hough is scarcely a fair statement of the situation That is to say, the same change had to be made often quite a number of times The real changes if you do not count the number of times that the same statement is repeated is not so many I have no personal knowledge of it. Now take this number of changes and they would be considerably less I have a vague idea of hearing Professor Remington say it was small twenty or thirty but I might be mistaken My recollection is vague

Q—But whatever the number was they were all included in a little pamphlet that was sent out after they were agreed upon by the committee, to those who already had the pharmacopeia which had come out two or three years previous? *A*—I do not know about that, Mr Hough I had several copies of the pharmacopeia and I do not remember of receiving a pamphlet. It might have been sent I do not remember at least.

Q—Then they were all embodied in a reprint and revision of the Pharmacopeia of 1907? *A*—So I believe or some such year I do not know the year

Q—And these changes were necessitated by the passage of the Food and Drugs Act? *A*—That was the occasion for them at least but, really Mr Hough I could not give you any information of any value on that subject, because I was not at all connected with it.

Q—Can you think of any other drugs or substances which have a pronounced or lethal effect on man which have no such effect on the lower animals? *A*—I have not thought of one yet, Mr Hough. You have not given me an instance and I have not thought of any

Q—If you should inject some castor oil into the buttocks of a dog what effect would it have? *A*—I have not the slightest idea

Q—It would not have any effect at all would it? *A*—I do not know I haven t the slightest idea

Mr T J Scofield—Your Honor, we have been very patient here in listening to a lot of interrogations that are not suggested by the examination in chief at all, or by anything that was brought out in the examination in chief

The Court—I did not hear the question, Mr Scofield

Mr T J Scofield—He wants to know what would be the effect if you inject castor oil into the buttocks of a dog

The Court—He may answer

Mr Hough—I want to take issue with Brother Scofield's statement that it is not material to anything brought out on direct examination It is directly in point, in view of the witness' statements on direct examination

Mr T J Scofield—From no standpoint is it material.

The Court—He may answer

To which ruling of the Court, the defendants etc. excepted

Mr Hough *Q*—Well now then that would not prove if that had no effect that castor oil would not be good in a man would it—in a human?

Mr T J Scofield—The injection in the buttocks, Mr Hough?

Mr Hough—Yes but I will let him inject it into any other part of the anatomy of the dog that he likes—for the purpose of answering the question

The Witness—If I had my way Mr Hough and I wanted to determine the effect of castor oil on a dog I would naturally give it by mouth as the only way in which I would naturally think of giving it that is to act on the alimentary canal

Mr Hough *Q*—Did you ever give any other medicines to a dog by the mouth? *A*—Oh yes

Q—In testing them? *A*—Yes.

Q—Which other ones? Which have you given, I say? *A*—Which have I given by mouth?

Q—Yes *A*—Emetics and cathartics, in the first place, I naturally give those by mouth Iodid I have already mentioned as a drug I have given by mouth There is a large list I could not think of off hand, but if you give me a list of drugs, I might remember what I have used But it would be difficult to choose out of the large number of drugs, off hand, and tell you those I have used by mouth and those I have not. It is a large list.

Q—There are drugs, doctor that can act on conditions—diseased conditions in the female pelvis without acting directly on the muscle of the uterus, are there not? *A*—That could act on the female—on the—

Q—Diseased condition in the female pelvis, without acting— *A*—Directly on those?

Q—Without acting on the muscles of the uterus? *A*—They might act on the blood vessels

Q—That would be taken through the mouth then wouldn t it? *A*—Through the mouth?

Q—They would be taken through the mouth? *A*—Might or might not

Q—For instance, a medicine which was—is an hepatic stimulant acts best taken through the mouth, doesn t it? *A*—The term hepatic stimulant' is a little vague to me Mr Hough If you could explain to me just what you mean by that—it is a term which is used here—I might be able to answer your question more intelligently

Q—Well I am using words in medical literature and I supposed you would understand the sense in which it was used. *A*—I do not know whether—I do know ordinarily—

Q—Well if you don t—if there is a medicine which acts on the portal circulation that would act best if taken through the mouth wouldn't it? *A*—It all depends upon the way in which it would act on the portal circulation, Mr Hough These are very indefinite ideas that you are dealing out here, and so I can only answer them in an indefinite way, by saying it might or might not. You will have to get a little more definite—if you want me to assume a definite case or you want to present a definite case to me, but you will have to be a little more definite—

Q—I am leading to the question which I asked before which is That there are other ways of medicines acting on this diseased condition in the female pelvis, than acting directly on the muscle of the uterus? *A*—I so stated in the direct examination

Q—And when those medicines are given to act in that way they are given best through the mouth are they not? *A*—In that particular way that I think you have in mind

Q—Doctor, you are a chemist, are you not? *A*—Oh—to a certain extent at least Mr Hough

Q—Suppose you were given a chemist s report which says of a certain medicine or compound that it is a dark brownish liquid having a neutral reaction a peculiar valerian like odor and a bitter mawkish taste arsenic, bromids iodids the potent alkaloids such as aconitin, morphin and strychnin, or the emodin bearing drugs such as aloes, cascara and senna were not found Potassium bitartrate (cream of tartar) was absent, thus indicating the absence of wine from grapes Alcohol was determined and 20 36 per cent. of absolute alcohol by volume was found The volatile matter amounted to about 97 per cent.— *A*—97 per cent.?

Q—Volatile matter *A*—Yes.

Q—The nonvolatile residue appeared to consist of vegetable extractives. This had a bitter taste and gave very faint reactions for alkaloids The quantity of alkaloid was too small to possess any appreciable medicinal effect, whatever its potency might be. Small quantities of a nitrate were present. A trace of combined ammonia also was present Could you state from that report what the herbs or drugs were from which that medicine was made?

Mr T J Scofield—If the Court please, I object to the question If he wants to ask him the question—or ask him a question based on the chemical analysis, let him read it all, and not a part of it, and omit some of it

Mr Hough—I have omitted only the comments I have stated the facts

Q—I say from those facts could you state or could any chemist state what the ingredients were, from which that medicine was made other than the alcohol which of course is indicated—specified? *A*—Stating the results as you do Mr Hough—

Q—What is that? *A*—Stating the results as you do—

Q—Yes. *A*—Assuming these to be the things I don t believe any one could say from that alone what particular drugs had been present there. You could say a large number that had not been present—a large number very large number but you could not say what particular drug devoid of these active constituents might or might not be there.

Q—And that would still leave a large number of drugs which might still be in there I mean excluding those which are specifically excluded *A*—Stating the thing without any other knowledge of the preparation that I think would have to be said

Q—Now when did you first learn that Wine of Cardui contained carduus benedictus and viburnum prunifolium? *A*—When did I first learn that? My first knowledge of the subject at all came in the article from which I take it you are practically quoting

The Court—You mean the article in the American Medical Journal?

The Witness—The first article in The Journal of the American Medical Association. That is the first I knew about the carduus benedictus at all.

Whereupon an adjournment was taken until 2 o'clock p m of the same day, May 10, 1916

May 10, 1916, Afternoon

TESTIMONY OF DR TORALD SOLLMANN (*continued*)

The Court met pursuant to adjournment Dr Sollmann resumed the stand for the defendants

FURTHER CROSS-EXAMINATION BY MR. HOUGH

Dr Sollmann testified that he first learned of the presence of carduus benedictus and viburnum prunifolium in Wine of Cardui when he read the article in The Journal He could not tell absolutely from that article that such were the contents, but the article suggested strongly that these substances were there His next information on the subject came in a conversation with Mr Scofield in which he heard the deposition of Mrs McElree His next information on the subject came from reading the papers of the Chattanooga trial in which it was stated that it had been admitted for the purpose of that suit that there were contained in Wine of Cardui as essential ingredients carduus benedictus and viburnum prunifolium in the combined quantity of 66 grains per ounce His next information came in a letter from Dr Leech in which the latter stated that he had prepared a synthetic formula corresponding in analysis to Wine of Cardui

SYNTHETIC PREPARATIONS

Q—*Doctor, couldn't you* make a synthetic preparation out of other material than those two, which would compare exactly chemically with Wine of Cardui, and which did not contain any carduus benedictus or viburnum prunifolium? *A*—By the exercise of considerable skill and having an exact analytical scheme in mind, such a thing might be more or less *remotely* possible It all depends upon how many data you have before you can see if you can match it. The hypothetical question that was asked me on that account assumed the presence of certain things which were found in this synthetic formula A and in no other

Q—Is it not a fact that one could extract a mixture of gentian and chiretta, with 20 per cent alcohol in your product, yielding three to three and a half per cent. of residue when extracted, then adding a small amount of oxalates, a trace of valerianic acid, a trace of alkali, a trace of potassium nitrate, of citrates, malates, and then subject this product to the same chemical examination to which Wine of Cardui was subjected in the laboratory of the American Medical Association Wouldn't the analytical results be the same as for Wine of Cardui, though, as a matter of fact, there was no carduus benedictus or viburnum prunifolium in it? *A*—May I ask a question, what the two drugs were that you assumed there?

Q—Gentian and chiretta *A*—Gentian and—

Q—Chiretta. *A*—Oh, yes Corresponding to which analysis, Mr Hough?

Q—The one that was testified to, the one that was made in the laboratory of the American Medical Association *A*—I want to get the question right, Mr Hough, as I believe there were several analyses testified to in regard to that

Q—Well, compare it with the one that was read to you here, with which you were to compare the synthetic medicine *A*—I don't believe so, Mr Hough, not in all respects possibly in the respects that you name, but not in all the respects that were intended in the question that was asked of me

Q—Now, in what respect would it differ? *A*—I *would have to* review that question And I do not know as I could definitely tell then in what respects it would differ I say it is inconceivable to me that it would agree in all respects You have added certain particular things to it now, and those particular things you might possibly—I don t say you would, but you might possibly make it agree in those particular things. That, however, you could strike on such a thing accidentally, that, of course, is an entirely different question But I am granting that you might make it agree in those respects—but that you also having made it agree in those respects, make it agree in all the other respects, that I cannot possibly conceive

Q—Then, because the chemical analysis of the two—that is the Formula A and the Wine of Cardui—appeared to be identical, it would not necessarily follow that Formula A was made of the same ingredients that Wine of Cardui was made of? *A*—It would follow as necessarily as the laws of probability admit, Mr Hough

Q—Well, you have just said, haven't you, that it would be possible to have it made out of something else? *A*—It would be possible, but it would be inconceivable

Q—Well, how is a thing that is possible inconceivable? *A*—This way, Mr Hough Now it is perfectly possible that, coming out of the court here and going across the street, I might find a bag with a million dollars on the street. Now, theoretically, that is possible At the same time it is absolutely inconceivable

Now, in just the same way, it is possible that I might on the first trial of this kind strike a combination that agreed in every respect—you would, if you tried it—with all of the things that have been named —that cnicin like residue, the products of the distillation, the reaction of the distillate, in all these respects, that it would agree, is theoretically possible, in just the same way as it would be possible for me to now cross the street and pick up a million dollars lying in a bag on the street

Q—Well, instead of inconceivable you mean probable, don't you? *A*—Well, as you like to use the terms But the analogy is fairly perfect in my mind, whatever terms or words you apply to it—that is perhaps a matter of choice

Q—Can you think of any other *method* from which a synthetic product could be made up which would analyze chemically the same as the analysis of the Wine of Cardui, which was read to you in direct examination? *A*—I could not say, Mr Hough. By feeling around I might try to construct such a formula, but I certainly could not say offhand what might be used I do not know of anything that would give a cnicin like residue, except the thistle species, that is all I know of, *or have heard about*—that would *give a residue of* the cnicin like characters which I understand I was asked to assume are discovered in this mixture

Q—*Don't you think the* power of suggestion was the controlling thing in your mind? *A*—No, *I don't think so*, Mr Hough.

Q—You don't? *A*—No

Dr Sollmann was then asked concerning his comparison of oats and straw to carduus marianus and carduus benedictus He stated that when he made this comparison he had in mind that an action had been attributed to carduus marianus on the basis of certain clinical observations which action had not been determined in carduus benedictus He had not read Shoemaker or Reel

The witness has not made any experiments on carduus marianus to determine its medicinal value The witness could not tell the difference between cnicus marianus or cnicus arvensis *The latter is mentioned* in his book, which is a book of reference He is not personally acquainted with every drug mentioned in the book

Q—How did you *happen* to put in cnicus arvensis, and not put in cnicus or carduus marianus or benedictus? *A*—I could not tell you that. I mentioned that in my book in a list of bitters that had been used in domestic medicine, and that I considered of no particular value, and therefore I did not particularly take *much pains to study* more about them. I think I said *so in the book*

Q—Is that the reasón you put viburnum prunifolium in the book that you did not consider it of any particular value? *A*—I don't put things in just because I consider them of no particular valuê. I did not put that in because I considered it of no particular value.

Q—When you put viburnum prunifolium in this book, you thought it was of some value? *A*—I doubted it

Q—You doubted it? *A*—Yes

Q—But you put it in as good for menstrual disturbances and as a uterine tonic and sedative, didn't you? *A*—No

Q—Did you put it in as a uterine sedative? *A*—I put it in Mr Hough, because I was giving information there about what various drugs were used for In the case of some drugs I had personal experience with them, and I gave that, in the case of other drugs, the reading that I had done on the subject, or the work I studied convinced me it was a good drug, and then I stated so In the case of other drugs, I put them in, and the reading had not particularly convinced me, because I had no particular—made no particular study of the literature, or because the literature was so unconvincing and not decisive in that case I simply made a statement of the uses to which it was put, and qualified that, if necessary, by what I thought about it, further *And* it was *in that* way—

Q—That is, it had not been proven pharmacologically? *A*—It had not been proven pharmacologically, yes

Q—You stated— *A*—Or clinically, as the case may be. *If I knew* it had not been proven clinically, or rather that it is practically valueless clinically, I would say that

Q—But, putting it in the book was suggesting to the *student* coming on to use it if it is necessary, wasn't it? *A*—No, Mr *Hough*

Q—What was your book written for? *A*—Just information about *things that* are of known use

Q—Information to whom? *A*—Students and practitioners. *It is* a reference book

Q—I beg your pardon? *A*—It is a reference book, as well as a textbook

The witness was then questioned concerning his assumption in the *hypothetic question* The witness stated that he had assumed what the question had asked him to assume regardless of his belief He has heard of other experiments made with the drugs mentioned all of which were negative with the exception of one experiment *performed on* the uterus of a virgin cat on which there was an action in large doses like the toxic action of ergot

The witness was then asked in detail concerning the experiment which he performed on the guinea-pig He stated that the uterus removed from the body and sliced in strips, in its response to the action of drugs, is the same as the uterus in a live woman's abdomen This would be dependent on the condition under which the uterus is kept The witness does not know of any medicine which acts on the uterus through the spinal cord

The witness was again asked concerning his assumption in the hypothetic question and he stated that he assumed the actions that were submitted to him without assuming anything else about the constituents

The witness stated in response to a *question* that under certain conditions alcohol in Wine of Cardui would make the medicine inadvisable in female troubles and this would be true as a general proposition

The witness was asked to name pharmacopeial preparations of which a person could take such an amount as would create intoxication He mentioned whisky and brandy, also simple elixir Taken in doses prescribed in the pharmacopeia he would not regard them as usually intoxicating although they might produce alcoholic effects

ALCOHOL AS A FOOD

Q—Is not alcohol a food up to a certain extent, a certain per cent ? *A*—Up to a certain per cent—the percentage question has little to do with that nothing to do with it

Q—Has nothing to do with it? *A*—No

Q—What do you mean in your book by limiting it to 20 per cent ? *A*—I don t recall that I did, Mr Hough

Q—What is it? *A*—I don t recall that I so limit it.

Q—Reading from your book page 414 Small amounts of weak alcohol taken at meals cannot therefore have a bad effect upon digestion and may even act favorably The alcohol should not be taken in strength greater than perhaps twenty per cent *A*—From your reading I hear nothing about food

Q—I am talking about whether or not the per cent. is indicated—you said it had nothing to do with it. Why then did you limit it to twenty per cent.? *A*—That was the question of food Mr Hough Your question applied to the food of the alcohol Now I tell you why I limit it there to 20 per cent is because you are speaking of the local action on digestion there.

Q—I was asking you about whether or not alcohol in certain proportions would be regarded in certain doses as intoxicating or non intoxicating and I understood you to say that the percentage had nothing to do with it that is the dilution *A*—Not of intoxication that is correct—but it does not say anything about intoxication there

Q—Now in what connection and in what sense did you make this statement? *A*—In the statement that you just read?

Q—Yes. *A*—That was in regard to its effects upon digestion, as you read it there

Q—Why did you limit it to 20 per cent ? *A*—Because stronger concentration disturbs or tends to disturb digestion

Q—Then the percentage has something to do with it, hasn t it? *A*—It has something to do with the effect on digestion but you did not ask me at all about that and I am trying to be responsive

Q—You say you were not asked about it— *A*—Not in what you read

Q—What does this sentence mean By the chemical energy thus liberated alcohol can perfectly replace carbohydrates and fats in the diet and is a typical non nitrogenous food *A*—Yes, Mr Hough but—

Q—Yes. *A*—Now may I discuss that a little?

Q—Certainly discuss it at your leisure. *A*—In the first place Mr Hough you started out from a question you asked me, what effect the alcohol would have—if I perfectly recall it—as a food in certain dilutions and I said the percentage has nothing to do with it we are speaking of the food question and I repeat again that as far as the food question is concerned the concentration of the alcohol has nothing to do with it

Then you read me a paragraph as to the effects of alcohol upon digestion in which the concentration has something to do with it Now you have not asked me a word about digestion You had asked me about its action as a food

Q—You said you were not talking about it as a food *A*—I am trying to be responsive to the question I am perfectly willing to reply to any question you ask me only you must ask it. Now—

Mr Hough—Now I will ask you—

Mr T J Scofield—Let him finish

The Witness—Now you come and read me a part of a sentence—I think it is a part of a sentence—but let me call it a sentence if necessary out of a paragraph and if you will have the kindness to read that paragraph through you will see what I said about the subject of alcohol in the year 1906 and if you want to ask me directly about my present opinion as to the effects of alcohol as a food I am perfectly willing to give you this—whichever you want, or both

Mr Hough *Q*—You mean this was a statement you made in 1906? *A*—That was a statement I made in 1906

Q—And what you said in 1906 is now no longer true? *A*—No What happens is my present opinion entirely agrees with what I said in 1906

Q—If it is your present opinion that it was not the truth at that time you were giving misleading information weren t you to the students? *A*—One gives the best information that one can in the stage of the science at that time—

Q—Of course. *A*—but Mr Hough that statement is perfectly true if you will—

Q—Why did you reading this language—

Mr T J Scofield—Let him answer—

Mr Loesch—Let him finish

Mr Hough—My what a chorus.

The Witness—But what I am asking you to do Mr Hough is not to take out a part of a quotation but to give the whole text. You know the old proverb about who can quote scriptures to suit his purposes—but I want you to give the whole text. Now if you will be good enough to read that whole paragraph—and I do not remember whether the other paragraph is necessary to that but I think the one paragraph at the bottom of that page and the first part of the next page you will get perfectly my opinion in the year 1906 and it expresses perfectly my opinion in the year 1916

Mr Hough *Q*—It is still your opinion then? Your opinion has not changed? *A*—It has not changed

Q—I understood you to say it had changed. *A*—No

Q—Now, I will read the rest of it "It is even superior to other foods— " *A*—Might I be permitted to have a copy of the book before me when you read Mr Hough, so I can see—

Q—Your counsel has a copy of the book, and you can follow me.

Mr Walker—Be sure you read it right

The Witness—I don't doubt but that Mr Hough will read it right, only I want to get in all that particular place there about it

Mr Hough *Q*—Now, after "non nitrogenous food" you say "It is even superior to other foods in one particular, viz., in that it does not require digestion ' *A*—Yes

Q—You stated that? *A*—Yes

Q—Is it a fact that it is superior to other foods? *A*—In that respect

Q—Now, I skip down to— *A*—No, no, Mr Hough, I would not skip I would not agree to that—I understood I was promised—I was desirous of having you read the whole thing, and I don t like the skipping after the promise was made

Q—Very well I will read it all ' By its poisonous side actions however it may at first cause an increased nitrogen excretion in individuals not accustomed to its use but this action disappears in a few days and it then saves nitrogen like any other food " Does that suit you better? *A*—That is what I want Now, the remainder of the explanation comes in the large print on page 415, the first paragraph there if you will read that

Q—It says Whilst there can be no doubt that alcohol is an excellent food in the sense of being a source of energy, other factors must be taken into consideration ' is that the thing? *A*—Yes that is proper

Q—Now you do say— *A*—Oh, the rest of that paragraph, if you please that whole paragraph

Q—All right 'The increased nutrition may itself be detrimental to the body either by preventing the complete combustion of metabolites which may possibly be connected with the origin of gout, or by leading to an abnormal deposition of fat A still more potent objection to considering alcohol as a generally useful food lies in its toxic action, especially its psychical effects. Alcohol can therefore be employed as a food only when a sufficient supply of energy cannot be obtained from an ordinary diet as, for instance, in digestive disturbances or when the demands on the organism are unusually large as in fever ' *A*—I think that sufficiently covers my opinion on the subject I would be glad to explain it further if it requires any further explanation

Q—Now then, what do you mean when you say ' Alcohol should not be taken in strength greater than perhaps 20 per cent."? *A*—On account of the local effects on the gastro alimentary canal

Q—Then if not taken in quantities greater than 20 per cent it would not have that effect— *A*—It would—let me get that question

Q—Wouldn t that effect— *A*—Let me have the question

(Question read)

A—It would not have that deleterious local effect that is right yes sir

Q—Now is it a fact that you recommend alcohol in any inflammatory conditions? *A*—In any inflammatory conditions? I could not say off hand, Mr Hough whether I did or did not

Q—What does this mean, on page 416 'Use in fever, chills inflammatory conditions etc ? *A*—Yes

Q—Does that mean that you recommend it in inflammatory conditions? *A*—In certain kinds of inflammatory conditions

Q—Now on the next page, 417 'In convalescence and general debility — *A*—Yes

Q— The value of alcohol in these conditions is established by long experience. Is that a fact? *A*—I think so Let me see now whether it is necessary to read the rest of that to explain it Mr Hough

Q—Now then—well you can read it if you like. *A*—I think that is self-explanatory I will be glad to read it if you wish

Q—Now did you say that 48 drops of alcohol, in a 20 per cent solution in a single dose is intoxicating? *A*—I say in a certain sense you can say it is intoxicating but I would not say in the sense that intoxicating' is commonly used no

Q—Then you say it is nonintoxicating? *A*—In the sense it is generally used

Q—In the ordinary sense? *A*—Yes in that dosage

Q—Did you make any experiments for the purpose of determining how rapidly the solid extracts from either carduus benedictus or viburnum prunifolium deteriorate? *A*—No and I would not know how to make such experiments really

Q—Why does the pharmacopeia not make all their fluidextracts in solid form? *A*—Because some people prefer to prescribe them in liquid form I suppose

Q—Don t you say it is a good deal better in liquid form? *A*—It may be, under certain circumstances a good deal better in liquid form yes sir

Q—And will keep better? *A*—That depends upon the drug

Q—Some drugs will keep better? *A*—Some drugs undoubtedly will keep better in liquid form. Others undoubtedly will keep better in solid form

Q—Haven t you written or stated that medicine in tablet form is not scientific medicine? *A*—I do not know as I have stated that Mr Hough

Q—What is your present opinion? *A*—That for certain medicines it is a very good way of administering them. For instance nitroglycerine tablets if they are properly made and not stored too long are very well exhibited in that form

Q—Suppose they were prepared for a long storage would they be good in that form? *A*—A fairly long storage Mr Hough. The nitroglycerin tablets are rather susceptible to a variation that occurs during the manufacture, rather than in their keeping

Q—Now then, what medicines— *A*—Then, of course, medicines that are given hypodermically are very commonly exhibited in tablet form All drugs that dissolve very easily can very nicely go in tablet form, if not volatile

Q—If there are any volatile oils in medicine, it could not be in tablet form very well, could it? *A*—Volatile oils can be given in that form Soda mints are often used in that form, and they contain the volatile oil of peppermint

Q—Now, what kind of medicines could not well be given in that form? *A*—Medicines that are *not* easily soluble, such as for instance, bismuth powder that will not spread over the intestines, things like salol which are not easily soluble, which tend to fuse into a *mass* of crystals if given in tablet form, and drugs that will volatilize pretty easily Of course, one could not give the things like *phenol (carbolic acid)* in that form, because it volatilizes pretty easily

Q—Doesn't the fact that these different fluidextracts, tinctures and syrups which have alcohol in them are specified in the pharmacopeia in that form indicate that the pharmacopeial revision committee think that that is the best form? *A*—Not necessarily, Mr Hough

Q—Not necessarily? *A*—A great many of these preparations are brought down from olden times, and people are used to prescribing, from the old days, and so they keep on prescribing that tincture, the way it is composed, although something else might answer the purpose just as well Now, as long as they are prescribed, the pharmacopeial committee takes it for its function to introduce them into the pharmacopeia, as long as they are fairly good preparations, still, it does not mean that they are necessarily the best In some cases they are the best It depends upon what is in them

Q—What is that? *A*—In some cases, the alcoholic preparations, of course, are the best

Q—Now, heat in making fluidextracts is never beneficial, is it? *A*—Heat?

Q—Yes *A*—Yes

Q—It is beneficial? *A*—Oh, beneficial? Official I thought you said

Q—No, beneficial *A*—It would not be beneficial, but that does not mean necessarily it would be detrimental

Q—Didn't you read in some of those books on carduus benedictus, that heat was detrimental to it? *A*—Some claim that heat is detrimental to it, but I don't know that the evidence for it is very good

Q—Do you know any evidence against it? *A*—You refer, I imagine, to the work on cnicin in that connection, do you, Mr Hough?

Q—What is that? *A*—The work on cnicin? that is, the—

Q—Natavelle? *A*—There is a very peculiar thing put in this work, which has prevented me from placing any confidence in it.

Q—Well, but there were other works which referred to that, weren't there? *A*—All the other works—that was work which was very indefinite—messy mixtures that really don't show very much of anything

Q—They have united in saying that heat is deleterious, haven't they? *A*—It produces, as they claim, certain amounts and degrees of heat, under certain conditions, and the amount of heat, etc—well, I have not been able to make much out of them

Q—Is it your opinion that the cnicin in carduus benedictus is the only active principle in that drug? *A*—I doubt whether I would call that active

Q—You mean in your opinion there are no active principles? *A*—I should rather—well, of course, the term "active" is always a relative term, but, my opinion—I at least doubt—I might say I think that there are no really active principles there There is a bitter principle of some sort or the other that has been called cnicin

Q—Is there a bitter principle in carduus marianus? *A*—Very, very little—in the seed, I am speaking of now

The witness believes that the statement from his book that "it is often desirable to have the patient ignorant of what medicine he is taking," is still true, also

> "On the one hand if he possesses this knowledge, he very frequently has preconceived ideas of the action of the medicine, and will either take it in excessive amounts, or will neglect to take it entirely, or interfere with its action in some other way On the other hand, it will encourage the habit of self medication"

Dr Sollmann was then questioned concerning his illustration about corn He stated that he believes that it helped to make the subject clear He was also questioned as to the drugs administered in self-limiting diseases such as pneumonia and whooping cough He does not know that any one has made a statement that the self-limiting disease should never be treated by medicines

Q—Doctor, what is the effect of the trophic nerves of the various organs of the body? *A*—The trophic nerves? That takes one into a subject of physiology with which in that particular I do not believe I am very *familiar* I think there has been some doubt expressed as to whether such things actually exist as trophic nerves and the responses that have been attributed to them, which have been explained by effects on the blood vessels But I would not presume to a sufficient acquaintance with that subject to make my testimony on it of much value.

REDIRECT EXAMINATION BY MR T J SCOFIELD

On redirect examination, it was shown that the statement concerning colchicum in Dr Sollmann's book was copied from the pharmacopeia at that time and that there was a mistake in the pharmacopeia, later corrected by an addendum Dr Sollmann had not made any revision of the book after publication which has been published One revision is now in press

Q—Now, Doctor, something has been said to you about your views on the subject of alcohol in this examination, and excerpts have been read to you from your book? *A*—Yes, sir

Q—From this place and that place, by gentlemen in their examination Now, I will ask you *if it is not true that* in your textbook you did not say on page 419, on the subject of "Alcohol and its Habitual Use"

> "It may be considered as proved, some authorities to the contrary notwithstanding, that a certain amount of alcohol (*variable in individual cases*) may be taken daily without any demonstrable *permanently* injurious effect But it stands equally certain that it is as dispensable to the organism as nicotine or caffein, and that it must be looked upon purely as a luxury The injury done by such use of alcohol lies alone in the fact that it is so apt to lead to the use of immoderate amounts"

Did you say that? *A*—I did

Q—And then did you say

> "With such excessive use, a train of phenomena *results* which may be grouped together under the name of chronic alcoholism and which depend in part upon the irritant action of the alcohol and in part upon specific injury to the neurons."

Did you say that? *A*—I did, neurons, meaning nerves

Q—And further

> "The first effects are local and depend largely upon the concentration of the spirits They consist of a catarrh of the whole alimentary canal, progressing from the pharynx downward They are characterized by the usual symptoms of catarrhal gastro enteritis loss of appetite, gastric distress, irregularity of stools, longing for spices, etc The chronic catarrh leads to malnutrition and emaciation when strong spirits are used It also appears to constitute a predisposing factor to carcinoma of these organs. In the case of excessive beer drinking, the habitual overdistension of the stomach leads to chronic *dilatation*"

Did you say that, Doctor? *A*—Yes, sir

Q—And carcinoma means a form of cancer, a malignant disease? *A*—Yes

Q—And then did you say

> "The continued presence of alcohol in the body sets up a series of irritant and degenerative phenomena in various other organs with which it comes in contact. These changes consist in fatty infiltrations, cellular degenerations and hypertrophy of connective tissues The neurotic changes in the tissue cells must be attributed to the continued irritation from the constant presence of the alcohol, and to this must be added the interference with circulation due to the changes which alcohol causes in the blood vessels These two—the direct irritant action of the alcohol on the cells, and the impaired circulation are inseparably connected in the production of the degenerations Of these, the fatty are the most common, since alcohol by its combustion, prevents the normal consumption of fat Connective tissue formation results as the ordinary consequence of necrosis of the —"

The Witness—Parenchyma That means essential cell tissue

Mr T J Scofield—That is too much for my medical learning A gentleman whom I used to know sometimes when he could not pronounce a word, used to say "we will pass that by" (Reading continued)

> "These changes are proportional to the concentration of the alcohol And since this is naturally greatest in the liver, kidneys and blood vessels these organs show the action first and most prominently And in the liver again, the periphery of the lobules is mainly affected, on account of the anatomic relation to the portal vein"

You said that, doctor, in regard to alcohol? *A*—I did

Q—Now, then, doctor, I suppose you still hold and maintain those same opinions now, do you not? *A*—I do, yes

Q—When you said in response to Mr Hough, that 48 drops of alcohol in a tablespoonful dose of solution was not intoxicating, what did you mean by that? *A*—He asked me in reference to one single dose, and my statement referred to the—

Q—But suppose it is repeated three or four times a day, and advised to be continuously taken in that way over a long period of time, then what would you think and say about it? *A*—Well, it might not produce the symptoms of drunkenness that are so often spoken of as intoxication, but it would produce the toxic, chronic effects of alcohol to a greater or less extent, depending upon the susceptibility of the individual

Q—Now, doctor, you used the word "toxic" What is meant by the word toxic? *A*—Poisonous The word "intoxication" means really poisoning

Q—Mr Hough asked you if, in your book, you have not referred to viburnum prunifolium as being employed more or less as a uterine sedative in menorrhagia and dysmenorrhea threatened abortion and so forth I will ask you if you did not say concerning viburnum prunifolium, and its use for such purposes, on page 510, that there is no experimental foundation for its use," referring to these things which I have just called your attention to *A*—I so stated

Q—Is that true today? *A*—That is more true today even than then

Q—It is true today that you have by some experiments that you have conducted found that it is not— *A*—That it is useless.

Q—good for those conditions *A*—Yes.

Q—Doctor, you have stated also in answer to Mr Hough on cross examination, that since 1840 you have read some 40 papers or articles or some 44 articles or papers written by different people on the subject of carduus benedictus *A*—Since 1650, 48 papers

Q—Very well since 1650 And that out of the 44 there were some four of them as you recall that seemed to indicate or contend or state that it has some sort of uterine action From the experiments which you have conducted and from your knowledge derived from a study of carduus benedictus in connection with the pharmacological experimentation which you have recently made with the opinion of these four gentlemen whoever they were that carduus benedictus might have some sort of action on the uterine organs of a woman change the opinion which you have expressed here? *A*—The four references to that subject that I recall gave no results of individual experiences of the authors They gave no sign that the authors had ever observed these actions. On the other hand they give considerable signs of confusion with the drug carduus marianus that had been used for menstrual disturbances to a greater or less extent

Since then these mentions of the drug contain neither any evidence nor any reference to any evidence they would not alter my opinion at all I would still think the drug is worthless as far as any knowledge of it is concerned The papers that mention it I would neglect and feel quite justified in neglecting completely

Mr T J Scofield—If the Court please, there was one question which I neglected to ask on the direct examination, and I would like the privilege of asking it now

The Court—Go ahead

Mr T J Scofield—It is not in the line of redirect examination

Mr Hough—I don't object

Mr T J Scofield—I was asking the Court for that information

Mr Hough—Don't you want to know whether I object or not?

The Court—As a matter of course, counsel consents

Mr T J Scofield—All right

Q—Doctor do you know what if anything is being done today and has been done during the last number of years by the medical profession by way of preventing disease? *A*—I know considerable about that in a general way

Q—I wish you would tell the jury what you know about it

Mr Hough—I think that is irrelevant and immaterial

The Court—It strikes me, Mr Scofield, that you are opening up a subject that will take the better part of the time between now and the adjournment of court for the summer, if it is to be discussed intelligently

Mr T J Scofield—Your Honor will remember when the opening statement was made in this case—and I don't wish to speak in the presence of the jury—

The Court—No no but this question seems to me to be a very comprehensive question If Dr Sollmann tells all he knows about that, we won't get through with this witness this week.

Mr T J Scofield—I am making my offer based upon what Mr Walker stated reflecting upon the medical profession

Mr Hough—Mr Walker never meant to reflect on the medical profession and I do not think he did

Mr T J Scofield—Well, we will read it after a while, and see what he did say

Mr Walker—All right

Mr T J Scofield—I said to the court and jury that I would show or we would show in our case that the doctors were using every effort to prevent disease, and thereby curtail the amount of money which they might otherwise make and it is for the purpose of placing ourselves upon the record now as we should be placed that we make this offer

Mr Walker—Why it is not in the record anywhere, it has not been contested here

The Court—I recall distinctly, Mr Walker, your statement to the jury

Mr T J Scofield—May I be pardoned for one additional suggestion? The court will remember that when Dr Webster was upon the witness stand a question was asked as to the publication of certain articles the $2 000 proposition, as your Honor will remember, by the American Medical Association through the columns of The Journal, where it was stated that physicians' incomes were reduced largely by reason of the fact that patent medicines" existed, and that the American Medical Association through The Journal and others, were therefore against patent medicines' and proprietary medicines

Mr Hough—That has nothing to do with this

Mr T J Scofield—It has within this line—

The Court—Mr Scofield you have not understood me I said to Mr Walker that I remembered distinctly the charge he made in his opening statement and that I felt something of this sort was proper But I am still of the opinion that your question is too broad

Mr T J Scofield—I do not want to broaden it. I will confine it to the—

The Court—Because, if the witness tells us everything that he has heard about it, that the doctors have been doing in the last ten or fifteen years, we will never get through

Mr T J Scofield—I will simply ask him to confine himself to such preventive measures as relate to typhoid fever, diphtheria, tetanus and yellow fever, measures of that kind as to what is being done and then if they want to go into it on cross-examination, they can

Mr Hough—I object to that The public is doing those things, not the doctors They are not going down in their pockets, and paying out their money to do this The public is doing it We are paying for it We don't deny that those things are being done

The Court—You may ask Dr Sollmann whether some public official discovered the matter of the typhoid prophylactics or some doctor in his laboratory did it, and so with others

Mr T J Scofield—I will accept the court's suggestion I will take the question as the Judge has suggested it

The Witness—Will you please repeat that

(The statement of the court was then read)

A—The matter of typhoid prophylactics takes in two quite distinct phases purification of the drinking water and the disposal of the garbage, sewage rather, and the employment of typhoid vaccines The matter of the purification of water supply and sewage has been elaborated by the bacteriologists, which were to a large extent physicians and has received every encouragement from the health officers

The people who were most instrumental in getting this pure water proposition pu into practice were the health officers who were medical officers and who had the most active support of the medical profession —they had that support, although undoubtedly the cutting down of the frequency of typhoid fever has cut down the demand for physicians enormously

The matter of typhoid vaccines was principally introduced by medical officers of the United States Army, by the Medical Service and has been widely adopted by physicians whenever it was possible to adopt it

Mr Walker—Do we have an objection to that?

The Court—Oh, yes

Mr Walker—It does not come up in the form of a direct objection, but we object to the whole subject matter

To which ruling of the Court in permitting said testimony to be given the plaintiff etc., excepted

The Court—Well, I presume that it is admitted by the plaintiff as to all the various preventive measures of disease that are known today, that the doctors even of the American Medical Association make use of them

Mr Walker—Oh, sure

Mr Hough—Certainly

Mr Walker—But that don't affect the materiality of the subject matter as proper matter to be introduced in evidence

The Court—No

Mr T J Scofield—I think, if the court please, that is all we care to inquire

The Court—I want to ask the witness one question Going back for a moment to this synthetic proposition Are there any other drugs that is other than viburnum prunifolium having a valerianic odor which are reputed to have, or have been reputed to have an action on the human uterus?

The Witness *A*—Nothing on the uterus The drug that I think of at the moment as having a valerianic odor, and not being viburnum prunifolium is valerian itself and it has through its odor probably a certain use in hysteria

The Court—Well, has that an action or has it a reputed action on the human uterus valerian?

The Witness—It has no reputed action, and it actually has no action

The Court—Are you enough of a botanist to tell whether the representation of the plant on the carton of the Wine of Cardui fairly represents the thistle, from which the carduus benedictus is made? *A*—It does not represent it at all. That is probably an entirely fanciful representation

Mr Loesch—What was that answer?

(Answer read)

The Court—That is all I want to know

RECROSS-EXAMINATION BY MR. HOUGH

The witness was further questioned as to the dates of revisions and reprints of his book. He stated that he had not kept track of the dates when reprints were issued, but that the last revision was in 1906, as shown by the date of the copyright, as printed in the book

Q—Did you know it was being reprinted in 1912? *A*—I think so I don t know whether I did that particular year, but I knew reprints were being made.

Q—After 1907? *A*—After 1907

Q—And you did nothing to correct this statement in accordance with the correction that had been made in the pharmacopeia? *A*—No I did not make any revision at all It stood in my mind as stated here by the copyright, that there were no revisions made since 1906, "copyrighted 1906"

Q—Now, did you mean by what Judge Scofield read to you, on the subject of alcohol in your book, to contradict what I read to you from your book, on the subject of alcohol, or were the two intended to be taken together and construed together? *A*—You asked me only about one single dose

Q—No, no, I am talking about what you said about 20 per cent of alcohol in foods. *A*—I said, that as far as the food was concerned, 20 per cent. of alcohol, or the percentage of alcohol, made no difference I think I said that.

Q—But I say, as to this statement you say, "Alcohol should not be taken in strength greater than 20 per cent."

Mr T J Scofield—That is not reexamination of anything I asked him

Mr Hough—I am entitled to ask him whether the statement—

The Court—Let me ask the witness, did you mean what you said in your book? *A*—Yes sir, I meant what I said in my book

The Court—Then, if your statements are contradictory, it will so appear He meant what he said

Mr Hough *Q*—What I read, as well as what Mr Scofield read? *A*—Yes

Q—Were you discussing under the head "Habitual Use of Alcohol," alcohol as an alcoholic beverage, or alcohol in medicines, on page 419 of your book? *A*—Any way in which it might be used habitually

Q—Either way? *A*—Either way

Whereupon the further hearing of said cause was adjourned until 10 30 o'clock the following day, May 11, 1916

May 11, 1916, Morning

TESTIMONY OF DR PAUL N LEECH

The court met pursuant to adjournment Dr Paul N Leech was again called as a witness for the defendants

DIRECT EXAMINATION BY MR T J SCOFIELD

Mr T J Scofield stated that Dr Leech was called to connect up a point overlooked when he was on the stand before Dr Leech testified that he sent samples of his synthetic preparation to Dr Loevenhart at Madison, Wis, on December 10 This was the formula of which he spoke in his previous examination

CROSS-EXAMINATION BY MR HOUGH

Q—What date was that Doctor? *A*—On or about the 10th of December I could supply the date accurately probably this afternoon, if you so desire

Q—You think it was last December? *A*—I know it was last December and know it was within five days of the 10th

Q—At that time you had learned the chief ingredients of Wine of Cardui from a faithless employee of the Chattanooga Medicine Company, who was then in the employ of the American Medical Association, hadn't you? *A*—I learned the chemical ingredients of Wine of Cardui solely upon my own knowledge.

Q—Didn't you learn it from that faithless employee? *A*—In the first place I do not know to whom you refer, Mr Hough

The Court—Better give the name, perhaps he may recognize the name

Mr Hough *Q*—Do you know Dr Bicknell? *A*—I have never met or seen Dr Bicknell to my knowledge I have read Dr Bicknell's article as it appeared in Harper's Weekly, but before it appeared in Harper's Weekly I was making synthetic preparations of Wine of Cardui

Q—You are in the employ of the American Medical Association? *A*—Yes, sir, I am in the employ of the American Medical Association

Q—You know that Dr Bicknell came here and went into their employ, don't you? *A*—I have not the slightest intimation of such a thing

Q—Didn't you see Dr Bicknell up here in Chicago? *A*—As I said before, I do not know Dr Bicknell I have never seen Dr Bicknell, nor do I know a thing about it

Mr T J Scofield—I want to say this, if the Court please, that Dr Bicknell is not in the employ of the American Medical Association

Mr Hough—I know he is not now

Mr T J Scofield—And never was at any time, or under any circumstances, or for any purpose

Mr Hough—Counsel will perhaps give us the evidence as to what he was doing up here with the Association

Mr T J Scofield—When?

The Court—You don't have to put in any evidence We never heard of Dr Bicknell before. Let us wait until something is said about it from the witness stand

Mr Hough—I don't want Judge Scofield to testify all by himself

Mr T J Scofield—Judge Scofield is speaking truthfully about it, and will testify if it be required or necessary

TESTIMONY OF DR. L E WARREN

Dr L E Warren again was called as a witness for the defendants

DIRECT EXAMINATION BY MR T J SCOFIELD

Mr Scofield announced that Dr Warren was called to connect up some points previously mentioned Dr Warren testified that he purchased in the open market a bottle of Wine of Cardui which was sent in the original carton under seal He made a memorandum by writing his name on the outside carton A similar package was sent to Dr Ralph Webster

CROSS-EXAMINATION BY MR HOUGH

On cross-examination the witness stated that it was his belief that the bottle sent to Dr Loevenhart was manufactured since 1906 It was his belief that the bottle sent to Dr Webster was manufactured subsequent to 1909 He was then handed a carton containing a bottle and stated that as far as he knew the carton was identical to that sent to Drs Loevenhart and Webster He marked this carton with his initial He did not open the cartons sent to Drs Loevenhart and Webster to look at the bottle. There was then handed to the witness the bottle from the carton which he had identified He stated that he could not state whether the label on this bottle was identical to that taken from previous bottle He was asked in detail concerning each statement on the labels He did not state positively regarding any of the statements whether they were on the labels of the bottle before mentioned He marked this bottle for identification

TESTIMONY OF DR ARTHUR J CRAMP

Dr Arthur J Cramp was again called to testify for the defendants

DIRECT EXAMINATION BY MR T J SCOFIELD

There was shown to Dr Cramp a clipping from *Collier's Weekly* for June 8, 1912 He stated that he had endeavored recently to obtain a copy of that issue but was unable to do so Mr Scofield wished to offer the clipping in evidence Objection was made and sustained after argument There was then shown to the witness the Cardui Fashion Magazine The witness stated that he believed that it was printed subsequent to 1909, as it contained testimonials dated October and December, 1909 There was then read into evidence an advertisement from page 4 of the Cardui Fashion Magazine

Dr Cramp then identified a bottle of Wine of Cardui stamped No 6, 1915 He stated that the serial number A 171 indicates that it was made or put out subsequent to the change from the corporation to co-partnership on the part of the company There was then handed to him a bottle of Wine of Cardui which he stated was put out previous to the other bottle because the alcohol percentage was not declared and the serial number was not on On the first bottle was printed "for menstrual disturbances of women," on the earlier bottle "recommended for menstrual disturbances of women" These bottles were offered in evidence as exhibits Dr Cramp then identified a bottle which he purchased in the open market in 1913 He opened the carton, retained the carton in the Propaganda Department floated off the labels from the bottle, put on his own label stating what was in the bottle, and turned it over to the laboratory for analysis

CROSS-EXAMINATION BY MR. HOUGH

On cross-examination, the witness again gave the facts concerning the bottles mentioned in the direct examination and stated that when Dr Warren commenced to analyze the preparation, he was told that it was Wine of Cardui

STATEMENT BY MR SCOFIELD

Mr Scofield asked to strike out from the examination of Dr J Clarence Webster a statement containing the quotation "will cure falling of the womb in all its forms" as there was an error in putting on the quotation marks

Mr Scofield then introduced as evidence two photographs of billboard exhibits, used by Wine of Cardui Company Objection was made, overruled and exception taken

TESTIMONY OF MR EDMUND ALBERT WHEATLEY

Mr E A Wheatley was called as a witness for the defendants

DIRECT EXAMINATION BY MR T J SCOFIELD

Mr Wheatley stated that he is the advertising counsel of the Chattanooga Medicine Company and the advertisements were under his direction He was asked how many billboards his company has which are 7 by 9 feet in size, similar to those shown to the jury

Mr Hough objected to this as irrelevant, calculated to confuse the issue and is not an issue in this case

THE COURT —There is one very well defined charge here, and that is that the business is founded on fraud

Mr Hough —On deceit is the language

THE COURT —Well, deceit

On the question of the admissibility of this witness' evidence as to the extent of the plaintiff's advertising of Wine of Cardui Mr Hough argued to the effect that it was not open to the defendants to bring evidence on the point that the business had been built upon deceit except such as might be introduced under the general charge that the business was a fraud, as based on specific facts stated in the argument The defendants were entitled to introduce evidence only on those specific statements of fact contained in the libel which were set out in the plaintiff's declaration and which had been read into the plea of justification

THE COURT —How could you specify generally a combination of events from which possibly a conclusion might be drawn that the business was built upon deceit? Would you have to, in your plea of justification, set out every single link in the chain and say ‘from this we draw the conclusion that the business was built on deceit?”

Continuing his argument Mr Hough replied to the Court that the difficulty of stating the necessary specific facts was indifferent and this necessity was incumbent on the defendants who must state the facts as distinguished from the conclusions that they would draw from them If they could not state the facts then they could not justify at all and no evidence would be permissible under the general charge Mr Hough having admitted on behalf of the plaintiff, without conceding that it was an issue in the case that he had advertised Wine of Cardui as extensively as he could, Mr Wheatley was allowed to leave the stand without testifying

Mr T J Scofield read from page 7 of the Ladies' Birthday Almanac of 1912 the almanac that is copyrighted and published by the Chattanooga Medicine Company

Two pictures of the Exhibit of the defendants at San Francisco were introduced as defendants' Exhibit Nos 78 and 79 and objected to by counsel for the plaintiff on the ground of immateriality The Court overruled the objection but preserved the exception

TESTIMONY OF DR. S W LEATHERS

Dr Leathers was called to the stand for the defendants Before this witness evidence was taken the Court intimated that it was disposed at this point to limit further expert evidence on the ground already covered The defendants' counsel explained that Dr Leathers was called to testify in reference to the relation existing between pellagra, hookworm and amenorrhea

Mr T J Scofield —I think the suggestion made by your Honor is rather unfortunate for us and particularly when we have been perfectly willing to reduce the number of expert witnesses which the rule allowed us to produce. I grant that this case has taken much time, but it has not been on our account, and if the record is examined here with care you will see that and that—

THE COURT —It may be the Court's fault

Mr T J Scofield —The cross-examination in this case has extended—I am not going to say for an unnecessary length

After some discussion out of the hearing of the jury the Court suggested that defendants should stop, on the understanding that the plaintiffs would not put on a greater number of experts than the former had called

On this the defendants rest their case

The jury was excused until the next day and adjournment was taken until 2 o clock p m , of the same day

(To be continued)

Correspondence

The Hospital Chemical Laboratory

To the Editor —In a comparative study of hospital laboratories recently made by the writer, it became apparent that our present system provides but inadequately for the modern requirements of chemical routine and research in such institutions In course of time the necessity for modern pathologic, bacteriologic and serologic laboratories has become so fully recognized that certain hospital laboratories devoted to these divisions of the medical sciences would do credit to a medical university But little attention, however, has been as yet given to the development of the hospital chemical laboratory This is probably due to the fact that the rise of biochemistry is as recent as it has been rapid, the result being that its importance in clinical medicine is only at present attaining full recognition Thus it is only but a comparatively few years ago that a physician of some experience in general laboratory technic could be expected to carry out adequately the chief chemical examinations required of the hospital laboratory The number of chemical examinations of clinical importance has steadily increased to the extent that this work now represents a large percentage of the total required of the hospital laboratories Again, in some instances the analytic procedures have become of such complex nature that physicians with their necessarily generalized scientific training cannot properly be held responsible for accurate results without undue sacrifice of time and energy Moreover, an increased amount of working space and apparatus is contingent to this augmentation in the chemical work of the modern hospital These reasons, if briefly stated, may be regarded as sufficient to justify the presence in a large hospital of an adequately equipped chemical laboratory in charge of an experienced biochemist

There are, however, various other grounds for encouraging the building up of such laboratories Present day teachers and research workers in biochemistry are often beset by a certain onesidedness in their points of view and attainments This tendency may incline either medically or chemically, but usually the chemical side predominates The underlying cause of these difficulties is that it is by no means easy to acquire the ideal blending of chemical and medical experience most desirable for biochemists The man of pure chemical training has far too few opportunities in the narrow confines of the university department of physiologic chemistry to acquire the needed balance of clinical experience On the other hand, the physician entering into a biochemical career often lacks the necessary chemical training If, however, our large urban hospitals possessed biochemical laboratories in charge of men of proper experience, no more ideal training could be afforded future workers in biochemistry than one obtained in such an environment Here both the young chemist and the physician working in such a laboratory could acquire sufficient mutual experience in these branches to assure of an even future development

Again, among the large collections of patients in our hospitals many important and interesting research problems constantly present themselves, often only to remain unsolved for want of an experienced biochemist to undertake them Many of such questions cannot be hopefully attacked by clinicians for want of sufficient chemical experience These problems may likewise escape the attention of the university biochemical department In this lies an additional reason for the existence of hospital biochemical laboratories

The necessity of such a development having been emphasized, a few remarks as to a suitable organization may be added The chief difficulty here to be encountered is the great scarcity of men in America sufficiently experienced in both medicine and chemistry to make ideal directors of such laboratories In hospitals affiliated with universities however, the director of the chemical laboratory might hold an assistant or associate professorship in the teaching institution Such an arrangement would permit of medical and biochemical students doing chemical research work in the hospital laboratory, and thus become of distinct advantage in their training The minor positions in the laboratory can best be occupied by young chemists Medical men connected with the hospital should, however, be encouraged to undertake research problems of chemical nature

There is a frequent tendency to place too great control of the activities of hospital laboratories into the hands of the clinical staffs In view of the modern development of medicine and its scientific branches, this course cannot but be followed by detrimental results Perhaps the most judicious relation which can be proposed for the clinicians and biochemist would exist, if to the former were to be confined the seeking for and propounding of research problems, and to the latter the choice and solution of those suitable for chemical study

With regard to the physical aspects of the hospital chemical laboratory, the following may be suggested Even if available working space be limited, an effort should be made to give those workers engaged purely in research, room separate from that devoted to routine The proper equipment of such a laboratory requires considerable judgment and experience but a discussion of the technical details cannot be here entered into A very essential adjunct is an experimental ward devoted *solely* to patients undergoing metabolic study Complete segregation and constant control of such patients is indispensable for work of any value If extensive studies are to be carried out, a specially trained dietitian is required in addition to nurses experienced in this kind of work Proper provision for animal experimentation is seldom made in the modern American hospital The actual requirements in this regard for the chemical laboratory are, however, usually but modest A single room provided with metabolic cages frequently suffices even for a busy laboratory

Finally, a working library should be regarded as essential in any completely equipped hospital laboratory in which serious research is attempted A comparison of American and German hospitals strikingly illustrates the lack of such libraries in most hospitals in this country This cannot always be ascribed to the usual excuse of shortage of funds, for $1,000 is quite sufficient to acquire a very useful nucleus of books and journals in any one of the medical sciences

Nelson W Janney, M D, Ph D, New York
Physiological Chemist of the Montefiore Home and Hospital for Chronic Invalids

Efficiency of the Rectal Examination in Obstetrics

To the Editor —The value of a rectal examination in a normal obstetric case has been emphasized by several writers The efficiency of the rectal examination is shown by the statistics from the outpatient department of the Presbyterian Hospital and Rush Medical College, where the standing order to students has been, no vaginal examinations after the fifth month During the last six years there have been over 4,000 deliveries with but two cases of puerperal sepsis, and these two were cases in which vaginal examinations had been made by the same attending man in each case, and episiotomies done with subsequent infection of the episiotomy sutures When we consider that these deliveries have been made in homes of the Ghetto district under insanitary conditions by students under supervision, the results seem worth while

The method of making a rectal examination is not complicated The gloved finger is carefully introduced into the rectum, following a recent enema, and, avoiding the almost constant hemorrhoids, the os is sought When the edge of the ring is found, the finger is swept around to determine the amount of dilatation Then the cervix is palpated to determine the amount of effacement and consistency The sagittal suture and fontanel, or fontanels, can be located, depending on the amount of dilatation of the os Palpation of the outlet is easily done A marginal or central placenta praevia is easily palpated A forelying or prolapsed cord may be found and, in short, almost any condition be ascertained as in a vaginal examination, with the exception of the best pelvic measurement we have—the conjugata vera The distance of the head is measured in terms of phalanges, so that an intern, an obstetric nurse or a gas anesthetist, reporting a case, may say "1, 2 or 3 phalanges away," as the case may be

The rectal examination takes less time than to prepare a patient surgically for a vaginal examination, it is less obnoxious to her, and it may be frequently repeated without danger of infection This is advantageous in cases of contracted pelves, as there arises no contraindication to cesarean section from repeated vaginal examinations If the patient develops a rise of temperature after delivery, the physician has no reason to reproach himself

Recently there was a case of thrombophlebitis in a well known obstetrician's patient It was a source of considerable satisfaction to him that no vaginal examination had been made since the fifth month

While a rectal examination is aseptic, it is at least debatable whether a vaginal examination may be made aseptic Nevertheless the remark is frequently made, "I use vaginal examinations entirely, and have no cases of puerperal sepsis Why should I change to the use of rectal examinations?" The answer to this question is that many cases of low grade salpingitis are ignored by the accoucheur A temperature of 100 or over on the third or fourth day does not always mean "lactation", pains in the lower quadrant of the abdomen from the sixth to the fourteenth day do not always mean "constipation," or "muscular rheumatism," or "neuralgia All of these phenomena often indicate a low grade salpingitis or pelvic peritonitis This low grade salpingitis or pelvic peritonitis so contracted is just as important a focus of infection as the tonsils, sinuses, teeth and other foci of chronic infection It seems more reasonable to suppose that the atrium of infection in a parous woman with nonsuppurative salpingitis is chiefly from her obstetric experiences, rather than distant foci in the body

William F Hewitt, M D., Chicago

Queries and Minor Notes

Anonymous Communications and queries on postal cards will not be noticed Every letter must contain the writer's name and address but these will be omitted, on request

ARTICLES ON SYSTEMIC BLASTOMYCOSIS

To the Editor —Please publish a list of references to articles dealing with systemic blastomycosis, more particularly those describing recent work

W F Sihler M D, Devils Lake, N D

Answer —The following is a list of references to articles on the subject

Morris R T Case of Systemic Blastomycosis, The Journal, Dec 6 1913, p 2043

Stober, A M, and others Systemic Blastomycosis, *Arch Int Med* April 15, 1914, abstr, The Journal, May 9, 1914, p 1505

Hill, H P, and Dickson, E C Case of Systemic Blastomycosis, *California State Jour Med* March, 1914

Powers, C A Two Fatal Cases of Systemic Blastomycosis, *Ann Surg*, June, 1914

Hurley, T D Unique Lesion of Heart in Systemic Blastomycosis *Jour Med Research*, January, 1916, abstr, The Journal, Feb 19, 1916, p 603

Massey, A Y Blastomycosis (?) in Central Africa, *Jour Trop Med and Hyg*, April 1, 1916

A MINOR NOTE IN A DIFFERENT KEY

To the Editor —I thank you very much for your kind letter of sound advice and deserved criticism of my article I can now see that I did stray away from the point that I should have centered my article about and that it hence was lacking that most essential element, complete coherence I am sure that all authors, and particularly the young ones such as myself, must appreciate the policy of The Journal in thus giving counsel and pointing out mistakes The writer is so liable to be blind to his own errors

A B C

Ignorance of Anatomy —It is shameful for man to rest in ignorance of the structure of his own body, especially when the knowledge of it mainly conduces to his welfare, and directs his application of his own powers —Melancthon

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Alabama Montgomery, July 10 Chairman, Dr W H Sanders, Montgomery

Alaska Juneau, July 5 Sec., Dr H C DeVighne, Juneau

Arizona Phoenix July 5 6 Sec, Dr John Wix Thomas 306 Goodrich Building Phoenix

California San Francisco June 27 Sec., Dr Charles B Pinkham R 527 Forum Bldg Sacramento

Colorado Denver, July 4 Sec, Dr David A. Strickler, 612 Empire Bldg Denver

Connecticut Regular, New Haven July 11 12, Sec Dr Chas A Tuttle, 196 York St. New Haven Homeopathic, New Haven July 11 Sec. Dr Edwin C. M Hall, 82 Grand Ave, New Haven Eclectic, New Haven, July 11 Sec, Dr T S Hodge, 19 Main St Torrington

Delaware Dover and Wilmington June 20-22 Sec Dr H W Briggs 1026 Jackson St Wilmington

District of Columbia Washington July 11 13 Sec Dr Edgar P Copeland The Rockingham

Illinois Chicago June 21 23 Sec., Dr C St Clair Drake, Springfield

Indiana Indianapolis July 11 13 Sec., Dr W T Gott, 84 State House Indianapolis

Maine Augusta July 6 7 Sec, Dr Frank W Searle 776 Congress St Portland

Massachusetts Boston July 11 13 Sec, Dr Walter P Bowers 1 Beacon St Boston

Michigan Ann Arbor June 19 21 Sec Dr B D Harison, 504 Washington Arcade Detroit.

Mississippi Jackson June 20 21 Sec. Dr J D Gilleylen Jackson

New Hampshire Concord, June 26-27 Sec, Dr W T Crosby, The Beacon Manchester

New Jersey Trenton June 20 21 Sec., Dr Alexander MacAlister 429 E. State St. Trenton

New York Albany Buffalo, New York and Syracuse June 27 30 Chief Examinations Division Mr Harlan H Horner State Education Bldg Albany

North Carolina Raleigh June 27 30 Sec., Dr H A Royster, Raleigh.

North Dakota Grand Forks July 4 Sec., Dr G M Williamson Grand Forks

Oklahoma Oklahoma City, July 11. Sec. Dr R. V Smith 502 Daniel Bldg Tulsa.

Oregon Portland July 5 7 Sec. Dr L. H Hamilton Medical Bldg Portland

Pennsylvania Philadelphia and Pittsburgh July 11 13 Sec Mr Nathan C Schaeffer Department of Public Instruction Harrisburg

Rhode Island Providence July 6-7 Sec. Dr Gardner T Swarts Room 313 State House Providence.

South Dakota Deadwood July 11 Sec., Dr Park B Jenkins Waubay

Texas San Antonio, June 27 29 Sec, Dr John S McCelvey Temple State Bank Bldg Temple

Utah Salt Lake City July 3 Sec. Dr G F Harding 407 Templeton Bldg Salt Lake City

Vermont Burlington July 11 13 Sec. Dr W Scott Nay Underhill

Virginia Richmond June 20 23 Sec. Dr J N Barney Fredericksburg

Washington Tacoma July 4 Sec. Dr C N Suttner Walla Walla

West Virginia Charleston July 11 Dr S L Jepson Charleston

Wisconsin Milwaukee June 27 29 Sec, Dr J M. Dodd 220 E 2d St Ashland

ARTICLES OF AMALGAMATION

Between the University of Pennsylvania and the Medico-Chirurgical College and Hospital

The Medico-Chirurgical College and Hospital shall become the Medico-Chirurgical College and Hospital, Graduate School of Medicine of the University of Pennsylvania

The following clinical professors of the medical department of the Medico-Chirurgical College—eight in number—shall automatically become members of the faculty of the Medico-Chirurgical College, Graduate School of Medicine, with the rank of full professors James M. Anders, Ernest Laplace, W Easterly Ashton, L Webster Fox, George M Boyd Judson Daland, E B Gleason, George E. Pfahler

The following scientific professors of the medical department of the Medico-Chirurgical College—five in number—shall at once be elected professors in the undergraduate school of medicine in the University of Pennsylvania with the same rank title and salary as they now have Seneca Egbert, John C. Heisler, Joseph McFarland, George H Meeker Horatio C Wood, Jr

Under the charter and statutes the ultimate control of all teaching in the University is vested in the Board of Trustees—subject to such control and subject to the terms of donations endowments made or to be made, the teaching of medicine and surgery to graduate students shall be under the direction of the Faculty of the Medico-Chirurgical College and Hospital, Graduate School of the University of Pennsylvania

No future amalgamation between the university and any institution now existing shall operate to create within the university a similar but independent school for graduate teaching in medicine and surgery

In any such case the graduate teaching in such school shall be done by this faculty as now composed or as from time to time constituted by action of the board of trustees

The age limit prevailing in the University of Pennsylvania shall not be operative in the case of the professors who come in from the Medico-Chirurgical College until at least five (5) years from the time the new graduate school is built and opened for instruction

The trustees of the university shall provide a new hospital containing 200 beds for ward patients and not less than 50 private rooms and a nurses' home The hospital shall include on the staff or faculty a professor of biologic chemistry and a professor of physiology, pathology, and bacteriology and shall provide for them well-equipped and thoroughly organized laboratories There shall also be a Roentgen-ray and electrotherapeutic laboratory and a department of physical therapeutics

That there may be no interference with the hospital facilities now enjoyed by the clinical professors of the Medico-Chirurgical College, the new hospital shall be completed and organized before the present hospital is vacated, unless the city should in the meantime take possession of the property

Subject to the agreement of merger with the Evans Dental Institute the dental school of the Medico-Chirurgical College shall merge completely in the dental school of the University of Pennsylvania its faculty becoming a part of the dental faculty of the University of Pennsylvania, and the student body uniting with the student body of the university

The following dental professors of the Medico-Chirurgical College shall be elected professors in the dental school of the university with the same rank, title and salary as they now have I. Norman Broomell, R. Walter Starr, L. Ashley Faught.

The School of Pharmacy of the Medico-Chirurgical College may become a distinct branch of the University of Pennsylvania to be known as the department of pharmacy and J W Sturmer shall be elected a professor in the department with the same title and salary as he now has

The University of Pennsylvania shall carry out all contracts and obligations entered into with students who are registered in the Medico-Chirurgical College at the time the merger is accomplished The trustees shall recognize new students who have registered and admit them to the university without further examinations Students who have passed their examinations and who present certificates from their respective deans shall be admitted to advanced standing in the university without formality and given a diploma in course.

The graduates of the Medico-Chirurgical College shall be eligible to membership in the corresponding alumni societies and also in the general alumni society

All assets, property and endowments held by the trustees of the Medico-Chirurgical College and Hospital corporations shall pass in absolute ownership to the corporation of the University of Pennsylvania, to be held as a separate fund and used exclusively for buildings development and maintenance of the Medico-Chirurgical College and Hospital, Graduate School of Medicine of the University of Pennsylvania

Representation of the Board of Trustees of the University of Pennsylvania shall be given to the Medico-Chirugical College if possible

Teaching in the Medico-Chirurgical College shall end with the present session of 1915-16 and the university trustees shall take immediate steps to transfer the professors and students of the Medico-Chirurgical College in accordance with the articles of amalgamation

The Alumnae of the Nurses Training School of the Medico-Chirurgical Hospital shall become members of the reorganized alumnae association of nurses of the Medico-Chirurgical College and Hospital, Graduate School of Medicine of the University of Pennsylvania

James M Anders
Chairman Amalgamation Committee
W Easterly Ashton
Secretary

Alaska January Report

Dr Henry C DeVighne, secretary of the Alaska Board of Medical Examiners, reports the oral and written examination held at Juneau, Jan 4, 1916 The total number of subjects examined in was 10, total number of questions asked, 100, percentage required to pass, 75 The total number of candidates examined was 2, both of whom passed The following colleges were represented

College	PASSED	Year Grad	Per Cent
Columbia University, Coll of Phys and Surgs		(1907)	80
University of Edinburgh		(1872)*	75

* Graduation not verified

California Reciprocity Report

Dr Charles B Pinkham, secretary of the California Board of Medical Examiners, reports that 43 candidates were licensed through reciprocity from December, 1915, to Jan 1, 1916 The following colleges were represented

College	Year Grad	Reciprocity with
Denver College of Physicians and Surgeons	(1909)	Colorado
University of Colorado	(1911)	Colorado
Yale University	(1903)	Connecticut
Atlanta College of Physicians and Surgeons	(1913)	Georgia
American Medical Missionary College	(1901)	Illinois
Bennett College of Eclectic Medicine and Surgery	(1902)	Illinois
Hahnemann Medical College and Hospital, Chicago	(1891)	Florida
	(1903) (1907)	Illinois
Northwestern University	(1907) Missouri, (1906) (1911, 2)	Illinois
Rush Medical College	(1908) (1912)	Illinois
Indiana University	(1908)	Ohio
Keokuk Med Coll, Coll of Phys and Surgs	(1902)	Iowa
Kentucky University	(1904)	Washington
University of Louisville	(1910)	Idaho
Johns Hopkins University	(1906) Iowa, (1910) (1912 2)	Maryland
University of Maryland	(1894)	Washington
Tufts College Medical School	(1906)	Arizona
University of Michigan Medical School	(1911)	New York
	(1912)	Michigan
Minneapolis College of Physicians and Surgeons	(1908)	S Dakota
Kansas City Medical College	(1894)	Nevada
Marion Sims College of Medicine	(1895)	Illinois
Marion Sims Beaumont Medical College	(1902)	Missouri
University Medical College, Kansas City	(1898)	Ohio
Washington University	(1913)	Missouri
Omaha Medical College	(1896)	Nebraska
Columbia University, College of Phys and Surgs	(1905)	New York
Cornell University	(1908)	New York
Long Island College Hospital	(1885)	Nevada
New York Med Coll and Hosp for Women	(1902)	New York
Western Reserve University	(1906)	Ohio
Jefferson Medical College	(1899) Michigan, (1906)	Penna
University of Pennsylvania	(1902)	Illinois
Tennessee Medical College	(1906)	Washington

Rhode Island January Report

Dr Gardner T Swarts, secretary of the Rhode Island State Board of Health, reports the practical and written examination held at Providence, Jan 6-7, 1916 The total number of subjects examined in was 7, total number of questions asked, 70, percentage required to pass, 80 The total number of candidates examined was 5, all of whom passed The following colleges were represented

College	PASSED	Year Grad	Per Cent
College of Physicians and Surgeons, Baltimore		(1915)	82 4
Harvard University		(1915)	80
Tufts College Medical School		(1909)	81 2
Jefferson Medical College		(1914)	81 5
Medico Chirurgical College of Philadelphia		(1915)	80

One candidate, a graduate of the Medico-Chirurgical College of Philadelphia in 1901, failed at the oral examination held Jan 13, 1916

Oklahoma January Report

Dr Ralph V Smith, secretary of the Oklahoma State Board of Medical Examiners, reports the oral and written examination held at Oklahoma City, Jan 11-12, 1916 The total number of subjects examined in was 11, total number of questions asked, 100, percentage required to pass, 70 The total number of candidates examined was 4, of whom 2 passed and 2 failed Twelve candidates were licensed through reciprocity Four candidates were licensed through reregistration The following colleges were represented

College	PASSED	Year Grad	Per Cent
Tulane University of Louisiana		(1914)	91
University of Tennessee		(1915)	83
	FAILED		
Birmingham Medical College		(1915)	79 *
University Medical College, Kansas City		(1897)	69

College	LICENSED THROUGH RECIPROCITY	Year Grad	Reciprocity with
Arkansas Industrial University		(1889)	New Mexico
Arkansas University		(1914)	Arkansas
College of Phys and Surgs, Little Rock		(1911)	Arkansas
Rush Medical College		(1890)	Wisconsin
University of Louisville	(1896) Missouri,	(1913)	Kentucky
Eclectic Medical University, Kansas City		(1911)	Arkansas
Lincoln Memorial University		(1914)	Tennessee
Meharry Medical College		(1912)	Texas
Memphis Hospital Medical College		(1913)	Tennessee
Marquette University		(1913, 2)	Wisconsin

* Fell below the required average in one or more subjects.

Book Notices

Harvey's Views on the Use of the Circulation of the Blood By John G Curtis, M D, LL D Based on a Lecture Delivered in 1907, before the Johns Hopkins Hospital Historical Club at Baltimore Cloth Price, $1 50 Pp 194, with illustrations New York Columbia University Press, 1915

This interesting book was published after the death of the author, and the final touches necessary for publication have been supplied by Prof F S Lee The book represents a large amount of scholarly work, and as pointed out by Lee is a more profound study of Harvey's ideas, as compared with the ideas of his most important predecessors, than has heretofore appeared Lee says "It is the work of one who from the background of the physiological science of today delighted in mastering the ideas of the fathers of modern physiology If his work is to be summarized in a single sentence, it may be said that he has shown Harvey to be a disciple more of Aristotle than of Galen Although Harvey had the courage and the originality to break away from him whose ideas had prevailed for fourteen centuries, and to find the truth in regard to the movement of the blood, he found much to approve in the master who had lived five hundred years before Galen Harvey's true position in the world of physiological thought has not before been known Herein lies Professor Curtis' contribution to the history of his science"

The Mortality from Cancer Throughout the World By Frederick L Hoffman, LL D, F S S, F A S A, Statistician, The Prudential Insurance Company of America Cloth Gratis Pp 826 Newark, N J The Prudential Press, 1915

So far as we know to the contrary this book represents the most complete study of the incidence of cancer yet published The literature on cancer statistics has been thoroughly reviewed, and figures are supplied on cancer in every aspect There are 220 pages of the book devoted to a discussion of the results The remainder, about 600 pages, contains charts and appendixes quoting actual statistics of cancer as it occurs in practically every part of the world where such studies have been made Special appendixes are devoted to the recommendations and instructions of various societies for the control of cancer, and about twenty pages to a bibliography The book is exceptionally worth while, and the Prudential Life Insurance Company is to be congratulated on the spirit that prompted the financial outlay involved in its production

Practical Physiological Chemistry A Book Designed for Use in Courses in Practical Physiological Chemistry in Schools of Medicine and of Science By Philip B Hawk, M S, Ph D, Professor of Physiological Chemistry in the Jefferson Medical College of Philadelphia Fifth Edition Cloth Price, $2 50 net Pp 638, with illustrations Philadelphia P Blakiston's Son & Co, 1916

The fifth edition of this book contains several new chapters on nucleic acids and nucleoproteins, on gastric analysis, on intestinal digestion, on blood analysis and on metabolism It offers a short, concise treatment of physiologic chemistry and is well adapted for use in schools One of its best features is that it serves as a laboratory manual, the numerous experiments which it describes are well chosen

Medicolegal

Diagnosis and Treatment of Fractures as Sprain

(Nickerson vs Gerrish (Me), 96 Atl R 235)

The Supreme Judicial Court of Maine overrules a motion for a new trial after a verdict for $5,000 damages was returned in favor of the plaintiff on condition that he remit all of the verdict in excess of $3 000 The court says that the plaintiff, in walking in a railroad roundhouse, January 5, stepped unawares into an ash pit about 3 or 4 feet deep striking his full weight on his right foot flat on the brick bottom of the pit and thereby fractured both bones of his right leg the fibula and tibia, about 3 inches above their lower ends About eight hours afterward he was attended by the defendant who diagnosed his injuries as a sprain and administered treatment accordingly Subsequently the defendant visited him six times, the last visit being January 14 or 15 At that time the plaintiff was on crutches and suffering considerable pain, but, at his suggestion that he wished to get back to his office the defendant advised that he might do so The defendant did not see the leg again until February 4 when the plaintiff called at his office, and it was 'obvious to the eye' that there had been a fracture as the result of the accident. The defendant did not, however, inform the plaintiff of that fact, or then propose any treatment to reduce the fracture, but advised him to have the leg massaged and report in three days On the evening of the same day, the plaintiff consulted another physician, and a roentgenogram of the leg was taken The next day the defendant was paid for his services and discharged from the case There was considerable testimony of physicians, on the one side and the other as to the difficulty of diagnosing injuries to the lower leg or ankle, and as to the methods of examination for such injuries and the relative utility of the different recognized tests which are used to detect fractures in the lower leg or ankle But, while that testimony was not altogether in harmony, it disclosed a consensus of opinion that there are certain recognized methods of examination or tests to be used when the nature of such injuries is not obvious but hidden and difficult of diagnosis That the defendant was perfectly familiar with all the methods and tests recognized by the profession to be used in such examinations and understood their relative usefulness was conceded He concluded that it was unnecessary in the plaintiff's case to have a roentgenogram taken of the leg, or to etherize the patient, and he relied on his manipulation of the injured parts and his examination for deformity or other possible indication of fracture, as affording him sufficient information on which to base his diagnosis He made a mistake, however, and his diagnosis was wrong But that fact alone was not sufficient to render him liable. Something else must be shown And the issue before the jury in this case necessarily was whether that mistake was the result of a failure of the defendant to use painstaking care and diligence, and to exercise the best of his admitted learning skill and judgment in his examination and treatment of the plaintiff's injuries That issue the jury found in the plaintiff's favor A physician impliedly agrees with his patient that he possesses that reasonable degree of learning and skill in his profession which is ordinarily possessed by other physicians under like conditions, that he will use his best skill and judgment in diagnosing his patient's disease or ailment and in determining the best mode of treatment, and that he will exercise reasonable care and diligence in the treatment of the case

Perforating Lining of Bladder—Abandoning Case

(Burnett vs Layman (Tenn) 181 S W R. 157)

The Supreme Court of Tennessee reverses a judgment entered on a directed verdict for the defendant, and remands the case for a new trial The action was for alleged malpractice The court says that the plaintiff was being treated for a bladder trouble, and it was thought necessary by the defendant to sound the urethra In the performance of this operation there was some evidence tending to show that the lining of the bladder was "pocketed" or perforated by the sound A physician does not guarantee the cure of his patients Presuming a careful diagnosis, a physician is not liable for damages resulting from an honest mistake in determining on the character of treatment to be administered, or in determining on the necessity of an operation These things are mere matters of judgment on which an action for damages cannot ordinarily be predicated While it is sometimes difficult to distinguish between negligence and an error of judgment, it may be said, generally speaking, that in performing an operation the physician is employing surgery as an art, and he is liable for negligence in operating So in this case, while the defendant could not be held liable for an error of judgment in determining on the sounding operation he was liable for any negligence in the actual performance thereof Some of the evidence introduced for the plaintiff indicated that the defendant did not exercise the care which an ordinarily prudent physician should have employed in his manner of using the sound In fact, in the absence of any explanation whatever from the defendant, it might have been inferred by the jury that the lining of the bladder would not have been perforated if due care had been used

Another count of the declaration sought to hold the defendant liable on account of his abandoning the case, and the court thinks there was evidence to sustain this count It appeared that when this sound was introduced the plaintiff heard something pop, and the withdrawal of the sound was followed by a flow of blood and pus The defendant appeared excited announced that he was no surgeon, and told the plaintiff that he must procure a surgeon The defendant then hurriedly left, without any effort to relieve the plaintiff or to administer to him further The plaintiff did not procure another physician until the next day or day thereafter It is well settled that a physician who undertakes the treatment of a case may not abandon his patient until in his judgment the facts justify the cessation of attention, unless he give to the patient due notice that he intends to quit the case and affords the patient opportunity to procure other medical attendance What is fair notice to a patient depends on the circumstances of each case. In this case the plaintiff appeared to have been suffering greatly, bleeding, and in need of immediate attention when the defendant abandoned him Certainly the defendant should have done something in this pressing case to have relieved the distress of his patient. The court thinks the defendant was liable for his conduct He should have remained with the plaintiff until immediate sufferings were relieved, or until another physician had been secured

Contract with Health Officer to Treat Cases Against Public Policy

(Town of New Carlisle vs Tullar (Ind) 110 N E R 1001)

The Appellate Court of Indiana, Division No 1, reverses a judgment for $362.22 obtained by plaintiff Tullar against the town for professional services rendered and medicines furnished in treating certain smallpox cases The plaintiff contended that he was first employed as a physician to treat the cases and was later in the same day appointed to and accepted the position of health officer of the town, the salary of which was $15 a year The court holds that the principle of public policy was involved, and that therefore the alleged contract under which the services were rendered was void if entered into after the plaintiff accepted the position of health officer and if entered into before he became such health officer and the services were rendered while he was such officer, the contract was thereby rendered invalid, and its enforcement would be against public policy Whether the contract was entered into shortly before, at the time or after the plaintiff's appointment as secretary of the board of health was not material, for it was not disputed that he rendered the services while acting in his official capacity as health officer However, the alleged contract did not come within the letter of the Indiana statute which prohibits officers from being interested in public contracts But whenever a public officer enters into a contract, the e[illegible]tion of which may make it possible for his personal interests to become antagonistic to his faithful discharge of public duty, such contract is held void on the ground that it is against public policy The secretary of a board of health in his official capacity owes high and important duties to the public His responsibiliy not only involves the health and sanitary conditions of the citizens generally, but in determining when it is necessary to act and the nature and extent of the measures to be employed he necessarily determines questions which reach and affect the public treasury When measures have been taken and treatment given at the expense of the public, he is charged with general supervision and must likewise determine when such measures or treatment may safely be discontinued The services for which a recovery was allowed in this case continued throughout the month of March The plaintiff's duties as health officer were continuous throughout that time The determination of the necessity for the continuation of the services at the expense of the municipality during that time was a question that devolved on him in his official capacity Whether he acted honestly and in good faith was not material to the question under consideration The question depended, not on what was actually done under the contract, but on what was made possible thereby Recovery for such continued services could not be sustained on the ground of emergency Cases dealing with emergency have been duly considered, but are not of controlling weight here, though they have application to many situations which arise in relation to public health

Insufficient Evidence of Wife Promising to Pay Physician

(Vernaglia vs Cirota (N Y), 156 N Y Supp 432)

The Supreme Court of New York, Appellate Term, First Department, reverses a judgment obtained by the plaintiff, and grants the defendant a new trial, with $30 costs to the defendant to abide the event The court says that the plaintiff, a physician, sued the defendant to recover the alleged reasonable value of professional services rendered to her husband at the joint request of the defendant and her husband, who had since died It is well settled that the performance of services by a physician for a third person at the request of another gives rise to no implied promise to pay for the services by the person making the request, unless the relationship of such person to the plaintiff be one which imports a legal obligation to provide them In order to support such a liability of a person under no legal obligation to provide the services of a physician, there must be an express promise on the part of such person to pay for the services, made before the services are rendered The plaintiff recognized this rule, and that a wife is under no legal obligation to provide such services for her husband out of her own estate, but he relied on an alleged express promise of the defendant to pay for the services The evidence of such express promise by the defendant was the testimony of the plaintiff that at the time he commenced the services he had a joint conversation with the defendant and her husband, the patient, in which they said "Doctor, you are the one we have confidence in, and we want you to visit me, or the sick one, three times daily, and we will pay you for everything you do for us" He was asked to state exactly what each party said, and replied "They all talked They were both talking together I cannot separate them" The defendant denied that she made any statement in regard to payment for the plaintiff's services, and testified that there were several other physicians in the room, who were all talking in consultation, and she had nothing to say to any one Resolving this issue of fact most favorably to the plaintiff, the court is of the opinion that the testimony did not show an express promise by the defendant to be individually responsible for the debt Assuming that the wife said, jointly with her husband, "We will pay you for everything you do for us," the court thinks that under the circumstances here disclosed the "we" clearly referred to the family, and to the husband as the responsible head of the family In the absence of a separate statement by the wife, saying "I will pay you," or words to that effect, no express promise on the part of the wife to be personally liable for the physician's fees could be found

Society Proceedings

COMING MEETINGS

Montana State Medical Association, Miles City, July 12 13
New Jersey Medical Society, Spring Lake, June 20 22
Washington State Medical Association, Seattle, July 12 14

ASSOCIATION OF AMERICAN PHYSICIANS

Thirty Fourth Annual Meeting, held at Washington, D C, May 9 11, 1916

(Concluded from page 1886)

Treatment of Typhoid by Intravenous Injections of Sensitized Typhoid Vaccine Sediment

Drs Frederick P Gay and H T Chickering, Berkeley, Calif The majority of about seventy-five cases of typhoid were treated with intravenous injections of polyvalent, sensitized vaccine sediment The mortality was about the same as the best hospital normal, from 9 to 10 per cent Distinct benefit was seen in cutting short the disease Over 40 per cent of the cases were abortively cured, with normal temperature within a week after the first injection In 25 per cent more an early induced lysis was observed

DISCUSSION

Dr Louis M Warfield, Milwaukee, Wis Sixteen of the twenty-one patients treated with this vaccine recovered, two patients were cut short abortively, a man of 40 and a child, the man suffered a typical relapse which was uninfluenced by the vaccine The five deaths were due, two to pneumonia, two to hemorrhage and one to long continued toxemia The average duration of fever in this series was thirty-eight days, the same as in the prior series of unvaccinated cases The shortest vaccinated case was seventeen days, the shortest unvaccinated case, sixteen days The highest leukocytic crisis took the count to 42,000, and occurred five hours after vaccination Two impressions were gained 1 The general course of typhoid is milder after vaccination 2 The subjective symptoms are ameliorated

Dr Joseph L Miller, Chicago Nonspecificity of the reaction needs emphasis Ludke obtained as good results from the use of albumose as from vaccine I have seen as good results from the use of proteose Recently I saw remarkably quick recoveries from acute infections following the use of chicken serum In acute arthritis I have been able to induce very striking crises with injections of typhoid vaccine

Physical Signs and Symptoms of Wounds of the Chest

Dr C P Howard, Iowa City, Iowa This series comprised 107 cases, of which eighty-seven were thoroughly studied The wounds were produced by rifle or machine gun bullets (forty-five) or by shell, as shrapnel, high explosive, or hand grenade (forty-two) In Group 1 (fifteen) no signs could be found, in Group 2, either pneumonia (four) or simple serous effusion (two), in Group 3, mediastinitis, one case In Group 4 a hemothorax was found, which was either infected (nine cases) or noninfected (fifty-six cases) Infecting organisms varied Symptoms were cough, pain, hemoptysis of varying degree, and dyspnea There was usually fever The physical signs suggested consolidation rather than fluid, owing to the great compression of lung Cardiac displacement was often striking In eight cases there were unequivocal and in five others suggestive signs of pneumothorax In four cases pneumonia existed on the side opposite the hemothorax Secondary hemorrhage into the pleural cavity was rare (one case) Simple fibrinous pericarditis occurred in three cases, and a pneumopericardium in one Treatment consisted of free drainage in infected cases and of simple aspiration or of oxygen replacement Mortality was only 7 per cent in the entire series

DISCUSSION

Dr David Riesman, Philadelphia I have observed the same physical signs described by Dr Howard as occurring in hemothorax due to gunshot wounds in traumatic hemothorax without penetration They were left alone and got well by absorption

Anaphylatoxins

Drs F G Novy and P H DeKruif, Ann Arbor, Mich An anaphylatoxin is a toxic substance developed in an organism as a result of the introduction into that organism of any one of various things It is now possible to make in five minutes a constant anaphylactic poison which will kill a 250 gm guinea-pig immediately in a dose of 0.25 c c If agar serum anaphylatoxin is centrifugalized, it may be used without harm, after fifteen minutes it kills, and this may be repeated it is a true colloidal periodicity Normal serums are all deadly poisons if treated right Normal blood serum, which is harmless when freshly drawn into a syringe and for one or two minutes thereafter after three minutes always kills Rabbit's blood was divided into two portions, one part defibrinated by beads was harmless, another part defibrinated with a rod always killed If serum can be so influenced out of the body, why not in it? The answer was found in the production of a constant poison by the use of agar as antigen, but only when it was employed in a certain way

Various Proteose Intoxications

Dr. G H Whipple, San Francisco The relation of proteose intoxication to general peritonitis, acute pancreatitis and acute intestinal obstruction was made the subject of study The material used experimentally was obtained in cases of acute peritonitis and of acute pancreatitis the proteose was one precipitated by five volumes of alcohol Constant presence of this proteose in the organs concerned was noted in the processes studied, it was recovered from closed intestinal loops, from exudates in sterile peritonitis, and from the extracted pancreas in induced pancreatitis It was absent in controls A rise in noncoagulable nitrogen has been noted in the three conditions studied, induced peritonitis, pancreatitis and obstruction in dogs was followed by rapid rise of noncoagulable nitrogen It is assumed that this is due to destruction of body tissue by a toxic agent, namely proteose. It is concluded that the evidence leads to the idea that, in the three conditions mentioned, proteose intoxication plays a part.

The Food Problem in Dispensary Patients of Different Nationalities

Drs H R M. Landis and F A. Craig, Philadelphia The proper utilization of food has an important bearing on the prevention of disease notably tuberculosis Are the people getting the right kind and amount of food for their money? Are foreign born dispensary patients adapting themselves well to American market conditions? A study was made of four groups of families three Italian, three Jewish, three Negro and three Polish Daily inventories of their food supply were made for three weeks by a nurse, calories, waste and cost were estimated Adopting a standard calory value including 340 calories represented by protein, it was found that all the groups approximated the desired calory value in the food purchased but there was much variation in the protein content The cost per head per day was as follows Italian 19 cents, Jews, 21.5 cents Negroes 24 cents, Poles, 34 cents

DISCUSSION

Dr. S Solis Cohen, Philadelphia The caloric content is by no means representative of the true value of food especially of its dietetic value for tuberculosis The therapeutic value of food in tuberculosis depends on its richness in nitrogen rather than the other ingredients

Etiology of Pellagra

Dr. E. J Wood Wilmington N C. Corn is regarded as bearing the same relation to pellagra as is borne by rice to beriberi The correctness of this view is proved both by experiments on the pigeon and by evidence found in the literature of outbreaks of pellagra brought about by eating highly milled meal which were promptly corrected by feeding whole meal. The fault lies in two factors The first is the heating of the corn in kilns above 120 C., which is enough to destroy the vitamin The second is the removal of the fat-containing germ from the grain The remedy consists in feeding the victims the whole grain, and this plan is also prophylactic

DISCUSSION

Dr Joseph Sailer, Philadelphia I recently saw two cases in Philadelphia, both patients had lived in the city for thirty years, neither had ever used corn meal as food

Dr Nathan E Brill, New York I recently observed pellagra in a man who had not been outside New York City in twelve years and had never tasted corn meal in his life

Dr E J Wood, Wilmington, N C I have seen many pellagrins who have never eaten corn meal in their lives, but who nevertheless were relieved on being fed corn chops Wheat germ will probably act in the same way The very extensive use of baking powder and soda in the South may be a factor in the pellagra problem, these ingredients in bread may liberate enough sodium carbonate to destroy the vitamins in the best of grain It is a fact that the sudden appearance of pellagra in the South was coincident with the disappearance of the old fashioned water-power grist mill

Lipase in the Urine of the Tuberculous

Dr William Charles White, Pittsburgh The study was undertaken while seeking a key to the disappearance of fat in the tuberculous Little if any lipase is found in the urine of normal human beings, little, if any, in urine from afebrile tuberculous persons, progressing well, but there is a marked rise of lipase in urine from febrile tuberculous persons approaching death Lipase rises in the urine before and during fever in the tuberculous, and declines with defervescence

Leukemia, Lymphosarcoma and Hodgkin's Disease

Dr. C. H Bunting, Madison, Wis., and Dr. J L. Yates, Milwaukee, Wis Leukemia, lymphosarcoma and Hodgkin's disease have in common (1) a primary focus of infection, (2) progressive glandular enlargement, (3) a chronic course with late anemia and late fever, (4) eventual fatal termination, (5) early Hodgkin's blood picture or leukemia blood picture, and (6) all yield a diphtheroid organism The leukemic blood picture may appear in all the groups Shall we adhere to the classification of these diseases in three separate compartments, or shall they be regarded as variations of one process associated with the diphtheroid organism?

DISCUSSION

Dr. H G Wells Chicago In studying mice in the course of tumor work a lymphatic condition indistinguishable from leukemia in man has been repeatedly observed Nothing like lymphogranulomatosis or Hodgkin's disease has been found Mice which develop leukemia do not have tumors

Dr Theodore C Janeway, Baltimore Our understanding of these conditions is not advanced by claiming that a diphtheroid organism is always present, or by explaining contradictory findings on the basis of technical errors We have studied all sorts of lymph nodes without the finding of the diphtheroid organism with any degree of constancy

Dr. Frank Billings, Chicago In forty-odd cases of Hodgkins's disease and other lymphatic diseases the diphtheroid organism was recovered from the lymph nodes in all except two But the same organism has been found in goiters in joints, in tuberculous glands, etc., so that I am inclined to the belief that it is a parasitic organism accidentally present in pathologic tissue. Animal experiments with the organism have not indicated any specificity and I do not believe it has any etiologic relation to the lymphatic diseases

Renal Function in Serum Disease

Drs W T Longcope and F A. Rackemann New York With a constant salt-containing food the sodium chlorid water and phenolsulphonephthalein output were measured Just as water and sodium chlorid output are diminished in pneumonia, so in eight of ten cases of serum disease there was a similar diminution, with salt retention in the tissues The salt and water were liberated during convalescence In another type (without edema) there **was no** salt retention and the administration of salt caused diuresis Thus serum disease may act in two ways

Occurrence of Living Tubercle Bacilli in a River Contaminated with Sewage from a Health Resort

Drs Lawrason Brown, S A Petroff, and F H Heise, Saranac Lake, N Y In 90 per cent of cases of open tuberculosis, viable tubercle bacilli may be found in the feces The Saranac Lake River is contaminated with sewage from Saranac village, the water was studied, samples being collected at various depths and distances Acid fast organisms were found in all specimens taken below the sewer outfall, except in two taken below the surface of the stream It was impossible to infect guinea-pigs with water taken 5 miles down stream Guinea-pigs could be infected with specimens taken 2½ miles down stream on cloudy days, but not with specimens taken on sunny days No acid fast bacteria were found in the water taken above the sewer outfall

Polycythemia Treated with Radium

Dr Joseph Sailer, Philadelphia After the usual therapeutic measures had been exhausted, radium was carefully employed The spleen greatly reduced in size, after four months, the red cell count dropped from 7,621,000 to 5,674 000 Lately the subjective symptoms have disappeared, and the patient has become a fairly active woman When the treatments are suspended, symptoms recur

DISCUSSION

Dr Max Einhorn, New York I saw a case of this kind a year ago in a man whose cells numbered 6,500,000, his principal symptom was dyspnea He had sought to increase the fluids of the body and so dilute the blood by taking a quart and a half of milk daily The symptoms were much improved by this simple expedient

Bile Content of the Blood in Pernicious Anemia

Dr M A Blankenhorn, Cleveland While the nature of jaundice in pernicious anemia was being investigated, the observation was made that many patients, although distinctly jaundiced, showed no bile in the urine The blood plasma, however, in every such case showed a corresponding jaundice These plasmas, when presenting a jaundice of a certain intensity, all gave a positive test for bilirubin Urobilin was found in the plasma of none There was often found a higher concentration of bilirubin in the plasma, coincident with the absence of bile in the urine, than is found in the plasma of patients with certain lesions of the liver which are always characterized by bile in the urine Bile salts were found in the plasma in ten out of thirteen cases The cases showing the highest concentration of bilirubin in the plasma were those showing evidence of the most active blood destruction The cases showing the highest concentration of salts were those in which nerve lesions predominated

Some Blood Pressure Phenomena in Exophthalmic Goiter

Dr A E Taussig, St Louis The vascular abnormalities in exophthalmic goiter are analogous to those in aortic regurgitation Blood pressure changes follow the same course Pulse pressures are high as compared with low or normal diastolic pressures As in aortic regurgitation, so in exophthalmic goiter the blood pressure in the thigh is higher than in the arm, there being a difference of from 22 to 56 mm In nontoxic goiters, as in normal persons, the arm and thigh pressures are equal The diagnostic value of this inequality of arm and leg pressures is doubtful, but it may be useful in distinguishing between toxic and nontoxic goiter

Function of the Thyroid, Normal and Abnormal

Dr H S Plummer, Rochester, Minn The function of the thyroid is to furnish a hormone for the control of tissue metabolism Hypothyroidism and hyperthyroidism are fluctuations in the reactions of tissue metabolism control As to pathologic changes, inflammatory changes may stimulate hyperactivity of the gland Both major and minor stimuli may lead to goiter Normal stimuli overdone may lead to colloid or hyperplastic changes Hypertrophy and hyperplasia may coexist, but it is doubtful if dividing cells can function The evolution of hyperplastic and colloid goiters is discussed The normal products of the thyroid are colloid and the hormone alpha-iodin of Kendall Overactivity of metabolism is a manifestation of hyperthyroidism and depends on the thyroid hormone as to every tissue of the organism

The Active Constituent of the Thyroid

Dr E C Kendall, Rochester, Minn Investigation of the alpha-iodin compound, isolated from the thyroid, has shown that it possesses the characteristic activity of the gland and is its active constituent Its isolation in pure crystalline form has been perfected, and preliminary experiments suggest that its function is concerned with the metabolism of amino acids

Pathologic Changes in the Sympathetic System in Goiter

Dr Louis B Wilson, Rochester, Minn We made a study of cervical and other sympathetic ganglia removed at operation and necropsy from patients with goiter, the results being controlled by a study of ganglia from nongoitrous patients Sections of the ganglia, stained by various methods, show extensive histologic changes, consisting of various stages of cell degeneration, namely, (*a*) hyperchromatization, (*b*) hyperpigmentation, (*c*) chromatolysis and (*d*) atrophy or (*e*) granular degeneration So far as may be determined from the small number of specimens examined (twenty-five cases), the pathologic changes in the ganglia are parallel to the stage and intensity of the symptoms of hyperthyroidism and to the hyperplastic and regressive change in the thyroid

Pancreatic Changes in Latent Syphilis

Dr A S Warthin, Ann Arbor, Mich The histologic study of the material from seven necropsy cases of diabetes showed, in all, syphilitic lesions in the myocardium and aorta The presence of spirochetes was demonstrated in five cases In all of these cases marked changes were found in the pancreas of the nature of interstitial pancreatitis, both interlobular and intra-acinar This led to the study of the pancreas in a large number of other cases of latent syphilis, with the result that in no case was a normal pancreas found In all cases of latent syphilis this organ shows marked changes in the form of a diffuse or patchy fibrosis with active inflammatory foci corresponding to the localizations of the spirochetes

Unilateral Renal Hypoplasia and Dysplasia, Relation to So-Called Hypogenetic Nephritis

Dr W M L Coplin, Philadelphia The histologic findings in eleven cases suggest that kidneys of this type have origin in a defective angiogenesis, this occurs in intrauterine life and results in hypoplastic kidneys The patients have high blood pressure, high protein content, and other evidences of defective elimination Renal symptoms appear as soon as any unusual burden is put on the kidneys In this class may be cases of painful kidney, nephritis dolorosa

The Main Factors Affecting the Intensity of the Sounds as They Pass from the Interior of the Lungs to the Periphery of the Chest

Drs George W Norris and C M Montgomery, Philadelphia The main factors diminishing the intensity of sounds as they pass from within the bronchi to the external chest surface are reflection and diffusion Reflection may be a potent factor where vibrations pass between mediums of different densities, as air and fluid or air and tissue. Sound is not much affected in its passage between fluid and tissue because the differences in density are not sufficiently marked Marked vocal resonance occurs over solid lung because the parenchyma is airless, thus eliminating reflection in this part of the lung The vocal resonance may also be increased when fluid separates a solid lung from the chest wall In the normal lung, on the other hand, reflection takes place between the bronchi and the surrounding air, between the tense membranous tissues of the parenchyma and the adjoining air, and between the air in the lung and the chest wall

Diffusion, while more or less a constant factor in all conditions, plays a special part in pleural effusion, the sounds becoming spread out or diluted as they pass from the lung surface in contact with the fluid to the point on the chest revealing diminished vocal resonance.

AMERICAN GYNECOLOGICAL SOCIETY

(*Continued from page 1818*)

Variations in Blood Supply of Ovary

Dr. John A. Sampson, Albany, N Y The material studied consisted of six fetal tubes and ovaries and thirty adult ones in which the arteries had been injected with bismuth, and ten adult tubes and ovaries in which the veins had been injected The uterine artery directly or indirectly supplied a varying portion of the ovary in all, the entire tube in six, the greater portion of the tube in twenty-three, and the round ligament and greater portion of the broad ligament in all but one.

In twenty-four of the thirty specimens the ovarian artery divided into two main branches, a lateral tubo-ovarian or tubal branch and a mesial ovarian, the latter anastomosing with the ovarian branch of the uterine. In six specimens the lateral tubal branch was absent The ovarian artery supplied a varying portion of the ovary in all, the distal portion of the tube in twenty-four and portions of the broad ligament in all, but the latter to a lesser degree than the uterine. In twenty-six of the thirty specimens the uterine supplied the proximal portion of the ovary and the ovarian the distal In four specimens in which the lateral ovarian branch to the tube was absent, the lateral tubal artery arose from the main tubal artery (uterine artery) and supplied the distal portion of the ovary, taking the place of the lateral tubo-ovarian branch from the ovarian artery In these four specimens the distal portion of the ovary was supplied by the uterine, the middle by the ovarian and the proximal by the uterine. As the blood supply of the broad ligament is both uterine and ovarian, as the usual blood supply of the tubes is both uterine and ovarian, as the arteries of the broad ligament communicate with each other and with those of the tube and round ligament, and as the tubal arteries communicate with each other, all these structures must be looked on as containing a potential blood supply to the ovary The actual venous outlet of the ovary is partly through the ovarian veins, partly through the uterine Anatomic studies suggest that if it is necessary to remove a tube without removing the ovary, it should be done with the least possible disturbance of the broad ligament and even then occasionally the blood supply of the distal pole of the ovary will be cut off, also in hysterectomy with conservation of the ovary the accompanying tube should be saved, if possible

Radium Treatment of Three Hundred and Forty-Seven Cases of Cancer of the Uterus and Vagina

Drs Howard A. Kelly and G F Burnam, Baltimore The use of radium in sufficient quantities greatly enhances the chance of permanent recovery of patients with uterine and vaginal cancers In early and good operable cases, the use of radium combined with operation adds greatly to the chance of recovery without a recurrence The most remarkable fact about the radium treatment of uterine and vaginal cancers is that it often clears up those cases which have extended too far locally and become firmly fixed to the pelvic wall, in other words cases which are utterly inoperable We have had 327 cases, including borderline cases, cancer fixed to the pelvic wall, great massive cancers choking the pelvis, and many in which there were general metastases and the radium was used to bring relief alone. Over 20 per cent of this group have apparently been cured In a large number of those who were not cured the discharges stopped, pain ceased, and health was built up

Heat as a Method of Treatment in Inoperable Uterine Carcinoma

Dr James F Percy Galesburg Ill The whole technic can be summed up in the one statement. Do not carbonize the tissues, for in the degree that this is done, in that degree is heat penetration inhibited, and heat penetration is the vitally essential thing

High Heat Versus Low Heat in the Treatment of Cancer of the Uterus

Dr Herman J Boldt, New York Low heat should be reserved principally for a second application, after rapid destruction has been accomplished with high heat, and the charred eschar that was caused by the high heat has been thrown off, and for those cases in which the cancer has so far advanced that the proper application of high heat will endanger the bladder or rectum The danger from secondary hemorrhage is not less with low heat than with high heat No evidence has been presented that shows the superiority of one method over the other Heat properly used and applied in correctly selected cases sometimes gives remarkably good palliative effects, but it has been conclusively shown that cancer cells are not destroyed any appreciable distance from the surface of application, certainly not deeper with low heat than with high heat

End-Results of Treatment of Sterility

Dr John Osborne Polak, Brooklyn One hundred and thirty-two uterine, and three ectopics, are the sum total of pregnancies occurring in 358 women in whom conception was a probability, or 37 per cent In a large number of sterility cases, the women applying for relief have no chance whatever of becoming pregnant, as the pathologic condition is such as to make conception impossible. The male is largely responsible for the poor results in treatment. There is a definite chemicophysiologic factor in conception, at present unexplainable, which is a cause of preventing conception Operative procedures on the uterus, except amputation of the hypertrophied portion, have but a slight influence on the end-results in the treatment of sterility Each case must be individualized, and both contracting parties carefully studied before any treatment is inaugurated

Rupture of the Scar of a Previous Cesarean Section

Dr Palmer Findley, Omaha A perfectly healed cesarean wound may be relied on to resist the forces of labor but in view of the fact that the integrity of the wound is an unknown factor in all cases, we are constrained to exercise the utmost caution in the conduct of every case in pregnancy and labor following cesarean section Failure to secure perfect healing is accounted for by departure from the principles of suture proposed by Sanger and by septic infection of the uterine wound The possible existence of latent gonorrheal infection may defeat the most painstaking efforts to secure perfect wound healing When cesarean section has been followed by a fever course, the uterine wound should be regarded as insecure in event of a subsequent pregnancy and should call for a repeated cesarean section at the onset of labor Sterilization and hysterectomy should replace conservative cesarean section when infection is known to exist The alternative invites faulty wound healing, if not more disastrous results Transverse fundal, extraperitoneal and cervical incisions have not lessened the liability of rupture in subsequent labors but, on the contrary have probably increased the hazard The possibility of rupture of the scar following cesarean section does not justify sterilization, but rather calls for the exercise of masterly control in the event of a subsequent pregnancy Version high forceps uterine tampons hydrostatic bags and pituitary extract should never be employed in the presence of a cesarean section The liability of rupture is a real danger and should stand as an argument against the increasing tendency to widen the scope of elective cesarean operations

Painless Labor

Dr. J Clifton Edgar, New York Never before has the need for an artificial painless labor been more urgent. Shock from pain in labor in the highly civilized neurotic woman must be reckoned with in the general childbed mortality Painless labor in these women is a life-saving measure The only absolutely painless labor is the one terminated by sur-

and general upbuilding I have one man who has been very well for several years, his hemoglobin has gone to 108 and he is very robust now His hemoglobin was down below 30 per cent at one time I cannot believe he will continue well I think he will ultimately die of the disease

Facial Diplegia in Multiple Neuritis

Dr Hugh T Patrick, Chicago The combination of complete double facial palsy with less intense involvement of the extremities is the striking feature In only one instance is the facial palsy partial But the degree of quadriplegia is exceedingly variable Assuming that multiple neuritis is always caused by a poison, and knowing that certain tissues are peculiarly vulnerable to certain poisons, perhaps we are equally reasonable in saying that certain poisons have a special predilection for certain tissues This cannot confidently be answered in the affirmative But the negative aspect is interesting Apparently the most frequent causes of multiple neuritis do not cause facial diplegia No case has been due to a metallic poison (except probably one of plumbism) and I believe no case is due to alcohol, although one patient was a wine dealer I have found no typical case due to diphtheria There is no case following typhoid unless my first case is one The most frequently surmised cause has been influenza, but in no case was this definitely ascertained, and in only four out of thirty-four cases was it thought highly probable

DISCUSSION

Dr Sidney I Schwab, St Louis I have had two patients, one died In both the bladder and rectal reflexes were lost I have an idea that the method by which the spinal cord is finally attacked is through the sheath of some of the peripheral nerves attacked I believe it is impossible anatomically to produce bladder and rectal insufficiency purely through the peripheral mechanism We must conclude that in these cases there is some definite process which gets to the cord along the nerves which happen to be attacked Another feature is the curious emotional state of these patients The neuritis itself may be somewhat insignificant, but in the midst of this neuritic complication the sudden or even gradual paralysis causes in these patients a most profound emotional disturbance The last patient I had became very emotional and very depressed, slightly maniacal, and with the disappearance of the facial diplegia these symptoms disappeared

Dr William G Spiller, Philadelphia I can add another case of facial diplegia which occurred in neuritis A year or two ago I had a man in my service with marked neuritis of the Landry type There had been ascending paralysis He had marked diplegia facialis It was purely alcoholic He had been admitted to the "drunk" wards many times In regard to Dr Patrick's statement regarding the possible toxic factor, during the past winter there has been an interesting case in the Philadelphia Hospital, that of a boy recovering from tetanus A facial palsy developed during the fourth or fifth week from a draft I thought that the tetanus intoxication predisposed the lad to the effect of the draft

Dr Archibald Church, Chicago Last November I saw a young man who presented the condition Dr Patrick outlined, rather mild multiple neuritis with diplegia There was a most painstaking search of the secretions of the body, spinal fluid, blood and everything else which was open to laboratory investigation, but these were entirely negative He was excessively fond of candy, and ate from 1 to 2 pounds a day After the onset of symptoms, which were largely sensory at first, a severe diarrhea developed He recovered rapidly and was discharged in ten weeks able to walk and feeling quite comfortable Another case, which I saw many years ago, occurred with acute intestinal disturbance

Dr Charles L Dana, New York I watched cases of neuritis in alcohol wards for twenty-five or thirty years, and there never occurred a case of facial diplegia I used to look out for that phenomenon because many years ago I had a case which falls definitely into the group Dr Patrick described A young man, very active and a moderate drinker, went to North Carolina, and while there was exposed to a good deal of cold and wet, and possibly ate canned food He developed a slight degree of multiple neuritis and very complete facial diplegia He gradually but slowly recovered from his neuritis and almost completely from the diplegia Though he was somewhat depressed, he apparently got well About ten years afterward he developed melancholia and shot himself I think the suggestion Dr Patrick made that these things are toxic in character is in harmony with what we have been believing in regard to the pathology of paralysis I have for a long time considered it an infectious neuritis, and I do not see that the fact that a neuritis is unilateral may exclude infection

Dr Smith Ely Jelliffe, New York What lies behind the individual susceptibility in these cases? It certainly is recognized that the toxic factor may be one of the links in the chain, but what about the nervous system itself? What about the variations in the nervous system? One must interpret the hysterical monoplegia of toxic origin, the diplegia cases of bacterial origin In such cases one must go to the hysterical side of the mechanism

Dr Samuel Leopold, Philadelphia I wish to place on record a similar case in which the etiology was clear It showed the typical facial diplegic and multiple neuritic phenomena in which the origin was given as quinsy

Obstetric Paralysis

Drs John Jenks Thomas and James Warren Sever, Boston There is no evidence from our experimental work, or clinical observation, to support the theories of Lange and T Turner Thomas that the primary cause of obstetric paralysis lies in an injury of the capsule of the shoulder joint, or a dislocation, with secondary damage to the nerve trunks This theory gets no support from experimental work, and in addition does not account for the distribution of the paresis of muscles generally seen, such as the spinati, supplied by the suprascapular nerves, or the frequent involvement of the sympathetic fibers going to the pupil and eyelid, often seen in cases of paralysis of the whole arm, and of the lower arm group The partial dislocation of the head of the humerus backward, the bending down of the tip of the acromion and the forward dislocation of the upper end of the radius are all secondary changes, due to the formation of contractures in the stronger or unaffected muscles Dislocations of the shoulder, separation of the epiphyseal end of the humerus, or fractures of its shaft, like fractures of the clavicle, are infrequent accidents, and while they may be unaccompanied by an injury of the plexus, more frequently they are complicating injuries, which rarely cause permanent difficulties The treatment, to be effective, must be adapted to the conditions in the individual case Treatment by massage of the paralyzed muscles and development of them as they recover through educational exercises are necessary in all cases in which the plexus has been injured to more than a very slight extent Resection of the plexus and transplantation of torn nerve roots of the plexus are to be reserved for cases which do not show evidence of recovery of function in definite groups of muscles within a reasonable time, generally not less than six months, though frequently this time needs to be extended to a year, a year and a half, or occasionally even longer The late complicating deformities about the shoulder and elbow joints should be treated on orthopedic principles We resort to division of the tendon of the subscapular muscles outside the joint These cases need careful aftertreatment by passive movement massage, and educational exercises to bring about free and natural movement in the joints and use of the extremity

DISCUSSION

Dr Charles K Mills, Philadelphia I believe that these obstetric palsies are due, in a large percentage of the cases, not to the direct lesion of the brachial plexus or of the shoulder, but to an avulsion of the nerve roots of the plexus Traction on the plexus occurs, with avulsion of the nerve roots or a certain part of the nerve roots of the plexus and, therefore, a total and permanent destruction which can never be very fully or largely repaired except by adaptation or compensatory operation

Dr. E. W Taylor Boston I was called to deliver a woman with a badly deformed pelvis It was necessary to do version in which the extraction was breech extraction Feeling that this type of lesion was exceedingly apt to occur, I put most of the traction on the lower extremities of the child until they were so damaged I did not dare continue, then the pressure was exerted over the shoulder, and a lesion of the brachial plexus occurred After delivery we found symptoms of double hemorrhage from both hemispheres

Dr John Jenks Thomas, Boston The lesion in these cases is not a constant one It varies in severity and in the situation of the injury Occasionally avulsion of nerve roots is seen Some of our cases have shown separation between the nerves of the plexus I do not agree in the advisability of early exploratory operations in all cases That should never be done in cases in which, at the time, soon after birth, we find the injury limited to the upper arm group of muscles These cases practically all show partial recovery after operation The question is somewhat different when we come to total arm paralysis I think our work has given us a clue as to why this is so In the upper arm paralysis, although the nerves are stretched, you have fraying out of the fibers and hemorrhage within the sheath, though there is no complete separation or tear of the plexus The only complete injury we find, then is the tearing off of the suprascapular nerve To suture the suprascapular nerve which is very small in the infant I think is practically impossible My plea is that we should make our treatments suit the individual case.

MEDICAL SOCIETY OF THE STATE OF NEW YORK

One Hundred and Tenth Annual Meeting held at Saratoga Springs May 16 18 1916

(Continued from page 1817)

Metabolism in Gout

Dr. Nellis B Foster, New York In gout, as in health the sources of uric acid do not differ, there is no new source of supply It seems likely then, that the uric acid increase in the blood in gout is due to defect in excretion The same increase in the blood is noted in renal disease For the deposition of uric acid as tophi, no explanation is at hand It is not due to the blood being saturated, serum dissolves more uric acid than water because of the phosphate content The explanation is probably to be found in the chemical state of uric acid which exists in two forms in many animals, free and combined This is not demonstrated in man as yet, but evidence pointing to this conclusion is accumulating

Treatment of Gout

Dr. Arthur F Chace, New York Treatment is directed toward lessening the formation of uric acid and to facilitating its elimination The elimination of uric acid is not increased by giving quinin colchicum or diuretics Alcohol, tea and coffee cause a retention of uric acid in the blood A purin-free diet is given containing all foods except meat, meat extracts, peas, beans spinach, tea, coffee and alcohol and an accessory diet consisting of meats and fish, of which the uric acid forming possibilities are known. By determining the eliminative capacity of the body for exogenous uric acid it is possible to keep the intake of purins well within the limit Or the number of days required to eliminate the uric acid arising from a definite amount of purin substance can be ascertained and articles on the accessory diet list given at such intervals that retention of uric acid is avoided The continuous use of alkaline drinking waters induces a deposition of sodium biurate in the joints and cartilages and is capable of precipitating an acute attack of gout. The value of the periodic administration of atophan or, in nonnephritic cases, of salicylates in depleting the blood temporarily of uric acid is a means of giving symptomatic relief and preventing the deposition of uric acid in the joints, thereby aborting acute gouty attacks Exercise massage and hydrotherapy assist in the elimination of uric acid while the treatment of acute attacks is limited to the giving of colchicum, large doses of hydrochloric acid, salicylates, water and the application of soothing lotions

Torsion of the Pedicle of Ovarian Cysts Complicating Acute Appendicitis

Dr Ross D Loop, Elmira I have found eight cases in the literature, and can add four personal cases In all these cases the appendix was primarily involved The diagnosis of cysts should be made before acute symptoms supervene The causes of torsion are many The tendency for organisms to grow spirally, the length of the pedicle, the freedom from adhesions, the heavy lobular space of the cysts, all are predisposing causes Emptying or filling of the bladder or rectum, violent peristalsis, increased pressure, coughing, vomiting, lifting falls or jolts, all cause rotation in a cyst which is often insecurely balanced Muscle spasm, vomiting and distention, so often accompanying appendicitis, are frequent features that will favor torsion The results of sudden strangulation are gangrene, infection and peritonitis, without any increase in the size of the cyst

DISCUSSION

Dr W M Brown, Rochester I have observed one case in which the only diagnosis made was appendicitis There seemed to be a very marked right-sided pathologic condition The patient was extremely ill I opened the abdomen and found the appendix to be absolutely normal There was a cyst of 6 ounces' content which evidently had ruptured shortly before the operation, because the viscid fluid was lying in the pelvis The cyst was as large as a croquet ball, and gangrenous The patient made a good recovery

Dr George Gray Ward, New York I have known a game of golf to accomplish rupture of a cyst There was violent pain, and at operation a strangulated cyst was found

Dr Milo L Seccomb, Auburn I had a case of a child of 9 years with an attack of apparent influenza It was thought that the bladder was distended At operation a cyst was found with a twisted pedicle

(To be continued)

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

American Journal of Public Health, Boston

May VI No 5 pp 431 532

1 Diphtheria Immunity Its Determination by Schick Test. W H Park and A Zingher New York
2 Health of Department Store Women in New York City K. Mann, New York.
3 Heart Disease and Its Industrial Relations W Coleman New York.
4 Classification of Hazardous Occupations. E. R Hayhurst Columbus
5 Relationship of Impaired Physical Condition to Accidents C G Farnum Peoria Ill
6 Health Hazards of Metal Mining Industry A. J Lanza Washington D C
7 Some Aspects of Home Use of Proprietaries With Children T C Merrill Washington D C
8 Grip Epidemic of Winter of 1915 1916 L I. Dublin New York
9 Bacterial Counts in Water Examination J Race Ottawa Canada.
10 Public Health Publicity Art of Focusing Public Opinion E A Moree New York

American Journal of Tropical Diseases and Preventive Medicine, New Orleans

May III No 11 pp 579-624

11 *One Hundred Cases of Malaria Treated by Mercuric Chlorid Intravenously N Barlow St Louis
12 Use of Alcresta Ipecac in Amebic Dysentery Report of Cases. W Allan Charlotte N C
13 Mosquitoes of Mecklenburg County, N C H. P Barret, Charlotte N C.
14 Mycetoma in Western Panama. W T Burres Panama
15 Intestinal Bilharziosis in Western Panama W T Burres Panama

11 Mercuric Chlorid Intravenously in Malaria—A solution of mercuric chlorid in physiologic salt solution was used by Barlow of such strength that 10 c.c. of solution represented

⅛ gram of mercuric chlorid The iodin used to disinfect the arm was washed off with alcohol, to avoid any possible formation of mercuric iodid An analysis of all sixty-nine cases recorded indicates that when there were but a small number of parasites in the blood, mercury usually brought about a complete sterilization at the first injection This result was obtained in some cases when there were as many as three parasites in each field With much higher infections the fever was reduced, sometimes disappeared after a few days to return later, and sometimes after a reduction, again rose but not to the point which it had reached previous to the injection Ill effects from mercury were seen in very few cases, and in these were very slight Diarrhea was observed in eleven cases, but rarely persisted more than one day, was not violent, or severe in character, and indeed, could rather be welcomed than looked on with disapproval Salivation occurred in but one case which was treated with three injections within five days In this case, it was very slight and disappeared three days later It seems that the constitutional effects of mercury, given intravenously, appear very quickly if they are to appear at all, and that their disappearance is equally prompt There seems to be but little danger, therefore, of the cumulative effects if an interval of four days or over is left between the doses, if such effects do appear, they will be very slight and will be promptly noticed Nephritis was not produced in a single case Phlebitis, at the point of injection, was observed in only three or four cases, and should not occur if a small sharp needle is used with careful technic

No routine treatment should be followed, says Barlow, but every case should be treated actively until all symptoms of malaria have disappeared until the blood is practically normal, excepting for a moderate anemia and leukopenia consequent from the administration of quinin, and above all, until the spleen has returned to normal size and is not tender During the fever all adjuncts to treatment, such as rest in bed, laxatives, restricted diet, and in severe cases, intravenous or multiple intramuscular injections should be used Quinin should be given daily according to the method found most efficacious by the experimenter, and an injection of mercury of one-fourth gram for each 150-pound weight of patient *should be given at such intervals as may seem best*, Barlow advises weekly intervals If the reduction of the size of the enlarged spleen be not very rapid and accomplished at the rate of at least 1 inch a week, he advises that search should be made for uncinaria, and if present this should be treated as soon as the fever has disappeared

Arkansas Medical Society Journal, Little Rock

May, XII No 12, pp 297 312

16 Acute Intestinal Obstruction W F Smith Little Rock
17 Trachoma C N Pate, Little Rock
18 Sympathetic Ophthalmia E M Hudson, Little Rock

Boston Medical and Surgical Journal

June 1, CLXXIV No 22 pp 775 814

19 Five Years' Progress in Diagnosis and Treatment of Tuberculosis by Massachusetts *Physicians J B Hawes, 2d, Boston*
20 *Disinfection of Septic Joints F J Cotton, Boston
21 Classification of Renal Infection, With Particular Reference to Treatment H Cabot and E G Crabtree, Boston
22 *Bacilli Dysenteriae as Cause of Infectious Diarrhea in *Infants* C Ten Broeck and F G Norbury, Boston
23 **Intraspinal Injections* of Bichlorid of Mercury E L Hunt, New York
24 Loss of Sight From Retrobulbar Neuritis Due to Accessory Sinus Disease, Report of Two Cases L E White, Boston

20 Disinfection of Septic Joints—Cotton emphasizes the fact that the joint itself—the closed joint—has a high resistance to septic infections, that the joint cavity is far more capable of disinfection than the surrounding muscular and intermuscular spaces, but only when it is kept apart—as a closed joint Cotton cites cases in which the joint was irrigated for *fifteen minutes* with 1 15,000 of bichlorid in salt solution, then flushed with simple salt solution, the capsule was then accurately stitched together This *treatment* is held to be harmless and efficacious Cotton is not sure that corrosive is the last answer, but he is convinced that we should disinfect and then seal the joint to protect it

22 B Dysenteriae as Cause of Infectious Diarrhea in Infants—In seventy-five cases of infectious diarrhea studied by Ten Broeck and Norbury the dysentery bacillus was recovered from the stool in fifty-one instances, or 68 per cent In five other cases they were unable to isolate it from the stool, but found it in cultures made at necropsy, thus making a total of fifty-six instances, or 74 and 6 10 per cent of the total number of cases in which the dysentery bacillus was found

23 Intraspinal Injections of Bichlorid of Mercury—Additional cases are cited by Hunt to show that the administra*tion of bichlorid of mercury directly into the* spinal *fluid* gives practically the same results as the administration of mercurialized serum It has the advantage over the latter of simpler technic, shorter methods, and easier administration, with less opportunity of infection Both methods, that *of the mercurialized serum and that* of the bichlorid directly *injected into the spinal fluid*, can be considered as valuable substitutes for the administration of salvarsan Certainly no ill results can accrue from the direct intraspinous injection *of one fiftieth of a gram of bichlorid* of mercury in syphilis *of the nervous system* It is well to make the initial dose small, it is therefore better to begin with a dosage of one *sixty-fourth of a gram* and later increase it to one fiftieth

Georgia Medical Association Journal, Augusta

May, VI No 1, pp 1 16

25 Review of Medical Affairs in Georgia W S Goldsmith, Atlanta

Iowa State Medical Society Journal, Des Moines

May, VI, No 5, pp 199 238

26 Surgical Treatment of Exophthalmic Goiter C J Rowan, Iowa City
27 Ectopic Gestation, Report of Three Cases A D McKinley, Lawler
28 Diseases of Maxillary Antrum W H Johnston, Muscatine
29 Appendicitis and Gallbladder Infection N Schilling, New Hampton
30 *Strychnin Not a Stimulant C S Chase and B H Schlomovitz, Iowa City
31 Intranasal Treatment of Frontal Sinus Disease E Cobb, Marshalltown
32 Educational Prophylaxis E L Rohlf, Waterloo

30 Strychnin Not a Stimulant—The authors contend that strychnin unsupported by unquestioned, specific, selective stimulants in pathologic situations, merits condemnation, and that its supposed unaided supportive action might be positively dangerous

Journal of Infectious Diseases, Chicago

June, XVIII No 6, pp 569 684

33 *Immunologic Studies on Hodgkin's Disease J J Moore, Chicago
34 Study of Gas Production by Different Strains of Bacillus Abortivo-Equinus E S Good and L S Corbett, Lexington, Ky
35 *New Culture Medium for Isolation of B Typhosus From Stools J E Holt Harris and O Teague, New York
36 *New Differential Culture Medium for Cholera Vibrio O Teague and W C Travis, New York
37 Diphtheria in Cleveland, Diphtheria Carriers R G Perkins M J Miller and H O Ruh, Cleveland
38 Variation of Gemmation of Blastomyces Dermatitidis in Tissue Lesion H W Wade, New Orleans
39 *Coexistence of Antibody and Antigen in Body B S Denzer, New York
40 *Improved Brilliant Green Culture Medium for Isolation of Typhoid Bacilli From Stools O Teague and A W Clurman, New York
41 *Method of Preserving Typhoid Stools for Delayed Examination, *Isolation of Typhoid Bacilli From Stools* O Teague *and* A W Clurman, New York

33 Immunologic Studies on Hodgkin's Disease—Moore reports experiments made to ascertain whether an immune serum could be produced which would have either palliative or curative action in this disease In April, 1914, immunization of a horse was commenced with sixteen strains of diphtheroid organisms obtained from cases of Hodgkin's disease Killed bacilli were injected intravenously The horses were immunized by repeated intravenous injections In complement fixation *tests this immune* serum bound complement when used with these same organisms as antigens in amounts as small as 0 0005 c c Complete hemolysis occurred with control antigens of staphylococci, streptococci, diphtheria bacilli, gonococci, and lipoidal extracts and 0 1 c c of the immune serum Complete hemolysis resulted when control horse serums were added to the diphtheroid antigen in amounts of 0 1 c c

Agglutinin was found to be increased fourfold by the immunization The refined serum produced fewer allergic reactions than the whole serum Monkeys were immunized with the same organisms by both subcutaneous and intravenous inoculations An increase in complement binding amboceptors was found in the serum after the injections By similar methods immune serums were obtained from rabbits Soluble toxins were not formed by these organisms when grown in glucose broth Complement fixation tests were made on ten individuals having Hodgkin s disease and in no case was there inhibition of hemolysis with antigens of the mixed cultures isolated from Hodgkin's disease In two cases antigens prepared from organisms cultured from the patient's glands were used with negative results Vaccination with these organisms did not appear to increase the complement binding antibodies in patients Complement fixation tests on the serums of these patients with control antigens were negative in all except one instance in which positive Wassermanns were repeatedly obtained Agglutination experiments with the serums of two patients were likewise negative Complement fixation tests made on serum from cases of lymphosarcoma lymphatic leukemia, chronic arthritis, and tuberculosis, diseases in which diphtheroid organisms have been isolated, all reacted negatively with the various antigens used

35 **Medium for Isolation of Typhoid Bacilli from Stools**—The medium devised by Holt-Harris and Teague consists of a combination of methylene blue and eosin in nutrient agar containing lactose and saccharose On plates of this medium after eighten hours' incubation the colonies of typhoid are colorless and transparent while those of B coli are a deep black and do not transmit light The medium immediately around the colonies of B coli remains practically unchanged Hence the plate is workable even when the colonies are close together More of the feces therefore, can be safely inoculated on this medium than on the Endo plate and it is to that extent more delicate and to be preferred

36 **New Differential Medium for Cholera Vibrio**—On sugar free nutrient agar to which Teague and Travis added 1 per cent saccharose 0.25 per cent nutrose and 0 0625 per cent bluish eosin the cholera colonies have red centers, while the colonies of B coli are uniformly pink

39 **Coexistence of Antibody and Antigen**—Antigen both in the cells and in the blood and antibody, likewise, in the cells and in the blood were demonstrated by Denzer during a period of three weeks succeeding the injection of a foreign serum into a guinea-pig Antigen in the cells was demonstrated for a period of seventeen days after injection, antigen in the blood also for seventeen days After this time these factors apparently disappear Antibody was demonstrable in the cells from the ninth day onward, and was in the blood after the fourteenth day

40 **Brilliant Green Medium for Typhoid Bacilli.**—The eosin brilliant green agar containing lactose and saccharose is the medium which Teague and Clurman recommend for the isolation of typhoid bacilli from stools After eighteen hours' incubation the typhoid colonies by reflected light are grayish in color while the colonies of B coli have red centers By transmitted light the typhoid colonies are transparent and colorless while colonies of B coli show dark centers On further incubation the typhoid colony becomes pink and the whole colony of B coli becomes dark red or dark purple in color, the typhoid colony remains translucent, while the colony of B coli becomes more and more opaque The typhoid colony may show the center somewhat darker than the periphery but the whole colony is much paler than that of B coli and is readily distinguished from it If the colonies are packed closely together on the plate, this differentiation is obscured the typhoid colonies assuming a darker color and those of B coli failing to develop centers properly, however, on account of the inhibition which the medium exerts on the growth of most strains of B coli, this is not likely to occur

41 **Isolation of Typhoid Bacilli from Stools**—Teague and Clurman advise that the feces be added to 30 per cent glycerin not more than 1 part of feces to 2 parts of glycerin, in a bottle with a screw top such as is used for sputum The bottle should be shaken well, to distribute the stool material throughout the glycerin The 30 per cent glycerin is prepared by adding glycerin to sterile 0 6 per cent. sodium chlorid solution

Journal of Laboratory and Clinical Medicine, St. Louis

May I No 8 pp 541 630

42 *Experimental Cloudy Swelling of Kidney in Rabbit W R Shannon Minneapolis
43 Progressive Lenticular Degeneration Report of Case F J Farnell Providence and A M Harrington, Howard, R I
44 *Specific Parenteral Digestion and Its Relation to Phenomena of Immunity and Anaphylaxis J Bronfenbrenner, Pittsburgh
45 Serotoxin of Jobling N R Smith, Ann Arbor, Mich
46 Microscopic Study of Fresh Bile in Disease of Liver H L McNeil Galveston Tex
47 *Newer Laboratory Methods for Early Diagnosis of Pulmonary Tuberculosis M H Kahn New York
48 Dissociation Curve as Index to Hydrogen ion Concentration of Blood R W Scott Cleveland
49 Simplified Hematocrit and Method for Determining Variations in Blood Volume A A Epstein, New York.

42 **Experimental Cloudy Swelling of Kidney**—The term 'cloudy swelling" is used by Shannon to designate a turbid swollen organ without regard to the microscopic picture that may be present To secure uniform results rabbits were used exclusively in this study The normal rabbit kidney always contains in the convoluted tubules, coarse albuminous granules Usually these granules are so numerous in a few tubules that these appear dark in the fresh tissue The granules are apparently thin-walled vesicles filled with fluid They are best fixed by solutions containing formaldehyd They are not fixed in solutions containing acetic acid On the addition of 5 per cent sodium hydroxid or potassium hydroxid these granules disappear suddenly When one kidney is removed the dark tubules are increased in the opposite kidney during the first twenty-four or forty-eight hours, but the increase of albuminous granules is not sufficient to cause and definite change in the gross appearance of the kidney Subcutaneous injections of tartrates produce a swollen, cloudy kidney, but there is no increase of albuminous granules The cloudiness and swelling are apparently due to edema, anemia, tissue disintegration, etc Intraperitoneal injections of autolyzed liver tissue produce a markedly cloudy and swollen kidney The albuminous granules disappear entirely The gross changes are apparently due to the same factors concerned in the tartrate experiments

Chronic suppurative processes attended with marked emaciation cause an enormous increase of albuminous granules in the kidneys These granules are often larger than the normal and irregular in shape, but they seem to have the same chemical composition Acute toxemias cause a rapid disappearance of the normal albuminous granules An acute toxemia superimposed on a chronic suppurative process causes a disappearance of the albuminous granules Kidneys which show an enormous increase of albuminous granules usually give a normal phthalein output and the cells are usually intact This form of cloudy swelling is therefore probably not a degenerative change but a physiologic response to an increase of protein waste products in the blood There is no relation between the formation of albuminous granules and fatty metamorphosis It is suggested by Shannon that the term cloudy swelling be discarded and that the several processes producing this appearance be considered separately

44 **Specific Parenteral Digestion, Its Relation to Phenomena of Immunity and Anaphylaxis**—In repeating the work of Abderhalden and his collaborators Bronfenbrenner found that, although under certain conditions of experiment, the antigen may be actually digested by the ferments of the blood of prepared animals, the ferments responsible for such digestion are not specific. In fact, as others have shown before the digestive ferments are present in every fresh serum and it set free can digest any suitably prepared substratum in vitro, without any specific predilection Bronfen-

brenner found that although the ferments concerned in the digestion are not specific (inasmuch as they can be made to digest any substratum), the phenomenon, as a whole is not devoid of a certain degree of specificity and therefore could not be reduced to mechanical absorption of antiferments

A systematic study of this question brought him to the conclusion that the element of specificity lies, not in the ferment itself, but in the mechanism of its activation Namely, he found that the apparent specificity of ferment action in vivo assumed by Vaughan, and demonstrated in vitro by the methods of Abderhalden, is due to the fact that the combination of specific serum with its corresponding antigen in vivo as well as in vitro, is followed by a radical change in the degree of dispersion of serum colloids This physicochemical change in turn is followed by the activation of a normal nonspecific ferment of the serum If such a conception is correct, Bronfenbrenner says, the phenomenon of specific *parenteral digestion* may be explained on a basis very similar to that offered by the chemical theory of Vaughan, but instead of specific ferments, the digestion will be ascribed to normal nonspecific ferments present in any fresh serum (complement?) and set free by a specific mechanism of combination between the antigen and antibody, very similar to that recorded by the meiostagmin reaction of Ascoli

47 **Laboratory Methods in Pulmonary Tuberculosis**—In fifty-nine cases of tuberculosis examined by Kahn, the serum test was positive in about 92 per cent of the cases, while the Weiss test was positive in about 13 per cent of the cases, and the diazo test in about 8 per cent In first stage cases, the serum test was positive in 84 per cent, while the Weiss test was positive in 4 per cent, in second stage cases the serum test was positive in 94 per cent and the Weiss test was positive in 9 per cent, whereas in third stage cases, the serum test was positive in only 15 per cent whereas the positive urochromogen test rose to 31 per cent

Kansas Medical Society Journal, Topeka

May, XVI No 5, pp 151 160

50 Nonunion of Fractures L. T Morrill, Peabody
51 Case of Paralytic Ileus G R Gage and C W Hall, Hutchinson
52 Early Serum Treatment of Diphtheria in Children F C Neff, Kansas City
53 Tumors of Bladder W D McVicker, Wichita

Medical Record, New York

May 27 LXXXIX, No 22 pp 941 982

54 Public Health and Defective M S Macy, New York
55 Legacy of Intemperate Use of Tobacco R Abbe, New York
56 Value of Examination of Applicants for Industrial Employment A H Doty, New York
57 Sterility in Female W P Healy, New York
58 Medical Literature as Specialty F Robbins, New York
59 Arteriosclerosis E L Hunt, New York
60 Anatomic Cause of Frequency of Hydrocephalus in Childhood W Browning, Brooklyn

June 3, No 23 pp 983 1028

61 Immunity, Natural and Acquired W H Porter, New York
62 Dietetic Treatment of Diabetes Complicated by Nephritis H S Stark, New York
63 Roentgen Ray Treatment of Uterine Myomata A Stein, New York
64 Nitrous Oxid Analgesia in Obstetrics N S Heaney, Chicago
65 Controlling Spread of Sputum W A Manheimer, New York
66 Epifascial Method of Injecting Mercury and Salvarsan Derivatives A L Wolbarst, New York
67 Therapeutic Value of Spleen Extract H R. Harrower, Los Angeles

New York Medical Journal

May 27, CIII, No 22 pp 1009 1056

68 Hysterical Mutism G H Makuen, Philadelphia
69 Treatment of Muscular Rheumatism W I Cheney, San Francisco
70 Treatment of Tuberculous Adenitis by Roentgen Rays R H Boggs, Pittsburgh
71 Chorea, Its Treatment M Grossman, New York
72 Tetanus, Surgical Complication in Present War E K Tullidge, Philadelphia
73 Antimeningococcic Serum in Joint Manifestations of Gonorrhea F Malleterre, Paris
74 Addison's Disease of Syphilitic Origin, Report of Case P M Schaffner and T Howard, New York
75 Curatelle and Modern Psychiatry (To be concluded) G W Jacoby, New York

Surgery, Gynecology and Obstetrics, Chicago

June, XXII, No 6, pp 635 752

76 *Roentgen Ray Diagnosis of Gas and Pus Infections as Complications of Wounds With Deeply Buried Bullets or Shell Fragments G G Davis, Chicago
77 Fracture of Os Calcis B F Lounsbury, Chicago
78 *Origin of Hypernephroma of Kidney A Fraser, New York
79 Twilight Sleep C B Reed, Chicago
80 Cases of End To End Suture of Bile Ducts T F Riggs, Pierre, S D
81 Simple Subparietal Rupture of Kidney, Report of Case F G Connell, Oshkosh, Wis
82 *Bleeding Nipples, Report of Cases D Lewis, Chicago
83 Dermoid Tumors of Mouth, Report of Case P K. Gilman, Manila
84 *Hereditary Syphilis as Etiologic Factor in Spurs on Os Calcis Report of Cases P P Swett and H F Stoll, Hartford, Conn
85 Thyroid Tumors of Bones. J P Kanoky, Kansas City, Mo
86 Postoperative Ileus, Report of Case W M Thompson, Chicago
87 Old Art and New Science of Surgery J R Eastman, Indianapolis
88 Reflex Ileus of Renal Origin D N Eisendrath, Chicago
89 *Some Experiments With Rubber Gloves C E Black, Jacksonville
90 Injuries of Spinal Cord, Report of Case A Schachner, Louisville, Ky
91 Thymus Death, Report of Case F H Falls, Chicago
92 Uterine Hemorrhages Actinotherapy H Schmitz, Chicago
93 Pyelitis of Pregnancy, With Special Reference to Its Etiology W C Danforth, Evanston
94 Primary Carcinoma of Urethra, Retention of Urine From Obstruction; Restoration of Function of Radium G E Shoemaker, Philadelphia
95 Infolding and Peritonealizing Stitch With Application of Same to Broad Ligament and Gallbladder H A. Shaw, Seattle
96 *New Operation (Decoud's) for Treatment of Varicocele D Del Valle, Buenos Aires, Argentine

76 **Roentgen Diagnosis of Gas and Pus Infections**—In all cases in which the Roentgen ray has shown a "halo-like" shadow about the missile, Davis found clinically, at the operating table and in the laboratory, evidence of an infection caused by gas forming and pus forming organisms

78 **Origin of Hypernephroma of Kidney**—Of thirty-four so-called hypernephromas of the kidney studied by Fraser there is convincing evidence, from both the clinical and morphologic viewpoint, that one of the number was a neoplasm originating in an accessory nest of cortical suprarenal cells, although the possibility of origin from the cortical cells of a misplaced suprarenal composite cannot be denied The patient in whom this tumor was found, was a female with pronounced male characteristics In still another case of so-called hypernephroma of the kidney, the morphologic evidence tends strongly to support the view that the tumor arose from multiple nests of suprarenal cortical cells lying in or around the capsule of the kidney In the remaining thirty-two instances, however, the morphologic evidence indicates that the tumors were derived from renal adenomas In other words, it would appear from this that the majority of cases of hypernephromas is misnamed and should be classified as nephromas, the term hypernephroma being reserved for malignant tumors arising from cortical suprarenal cells

82 Abstracted in The Journal, January 22, p 303

84 **Hereditary Syphilis, Spurs on Os Calcis**—This paper is based on a study of nine cases, in three of which the symptoms recurred after temporary improvement, following the removal of the spurs In the other six, no operations were performed The diagnosis was confirmed in seven cases by Roentgen ray As the result of the study of these cases of spur formation, Swett and Stoll believe that hereditary syphilis is responsible for many of these exostoses The study of the family history suggests syphilis more frequently, perhaps, than does the examination of the patient himself who rarely presents any obtrusive signs of hereditary syphilis, though a very careful examination will often reveal something that is suggestive The Wassermann test was negative in all the cases

89 Abstracted in The Journal, January 15, p 218

96 **New Operation for Treatment of Varicocele**—This operation done by Del Valle diminishes the congestion of the veins by alternate ligatures and suspends the testicle at a convenient height, thus correcting the ptosis He first exposes the external abdominal ring, then the spermatic cord The he dissects the veins, from the external abdominal ring to the

testicle, from the other parts of the cord The operator carefully separates the veins into two groups an anterior and a posterior A catgut ligature is now passed and tied around the posterior group one finger's breadth above the upper limit of the testicle Another ligature (silk) is similarly applied to the anterior group but two fingers' breadth above the level of the catgut suture and left long The anterior group of veins is passed through an opening in the fascia of the internal or external pillar so as to raise the testicle The operation is finished by suturing the edges of the incision in the fascia together behind the loop of the veins thus leaving each end of the incision open for the veins to pass through

Washington Medical Annals

May XI No 3 pp 181 221

97 Case of Dystocia Following Ventral Suspension W S Bowen Washington D C
98 Observations and Conclusions of Deputy Coroner W B Carr Washington D C
99 Case of Fracture of Acetabulum D L Borden Washington D C
100 Case of Mastoiditis Complicated by Purulent Cerebrospinal Meningitis Operation and Recovery W H Huntington Washington D C

Wisconsin Medical Journal, Milwaukee

May XII No 12 pp 487 524

101 Chronic Mouth Infection in Relation to Systemic Disease R H Ivy Milwaukee
102 Wassermann Tests and Cerebrospinal Fluid Examinations Free of Charge. W F Lorenz Mendota
103 Cancer of Lower Lip V F Marshall Appleton
104 Gonorrhea in Its Relations to Family A T Holbrook Milwaukee
105 Case of Acute Ascending Paralysis Following Grippe L M Warfield Milwaukee.

FOREIGN

Titles marked with an asterisk (*) are abstracted below Single case reports and trials of new drugs are usually omitted

British Medical Journal, London

May 13 I No 2889 pp 677 708

1 *Gerontal Constipation and Its Treatment. W A Hollis
2 Sarcoma of Frontal Lobe Giving Rise to Ocular Signs Only R B Hird.
3 Suture of Nerves and Alternative Methods of Treatment by Transplantation of Tendon R. Jones
4 Importance of Method in Isolation of Pathogenic Organisms of Typhoid Group From Feces C H Browning and L H D Thornton
5 *Examination of Fifty Dysentery Convalescents for Carriers J A. Arkwright W Yorke O H Priestley and W Gilmore
6 *Easy and Rapid Method of Doing Widal's Reaction for Typhoid A. C Coles
7 Treatment of Wound Infections. W P Morgan.

1 **Gerontal Constipation and Its Treatment.**—Among the causes of constipation in the aged Hollis mentions prostatic enlargement, ineffective peristalsis and dryness of the intestinal mucosa which leads to excessive straining at stool and may also account for the comparative frequency with which volvulus of sigmoid affects old men, the twisting of the gut being an immediate consequence of an overstrain The treatment of gerontal constipation is medicinal, dietetic and manipulatory So far as drugs in general are concerned Hollis says their action can at best be only palliative Within these limitations and as a preventive of a colic cascara is very useful It ought to be given in a full dose directly and falling off in quantity or quality of the daily evacuation is observable The ordinary rules regarding the modified requirements of the aged man for meats and the satisfactory mastication of food should be in all cases carefully observed Dental hygiene is also very important. The less stimulant the old man absorbs the better his ultimate chance of longevity Cleanliness is undoubtedly the most important manipulative procedure Congested piles rents in anal mucosa commencing prolapse all rapidly yield as a rule to a regime of cleanliness But in order that the hygienic procedure may produce the maximum effect, it must be started early When there is much straining at stool the gerontal right index-finger, well guarded it may be, with two or three thicknesses of tissue paper, should be pressed on the perineum just behind the symphysis and so relieve the abnormal pressure of an enlarged prostate on the rectum

5 **Examination of Dysentery Carriers**—Among fifty dysentery convalescents examined by the authors three to six months after the onset of their illness, nine were still excreting *L histolytica,* two were still excreting *B dysenteriae* (Shiga) These eleven men were therefore potential sources for the outbreak of fresh epidemics

6 **Easy Method of Doing Widal's Reaction for Typhoid**—The method devised by Coles is as follows With a color grease glass writing pencil, or a piece of wax, draw a line across the middle of two slides at right angles to their long axes Spread a film of the blood to be examined on one half of each slide, and, when dry, spread a film of normal blood as a control, on the other half of each slide. Dry Place a small drop of an emulsion of killed typhoid bacilli on the center of each half of both slides, and rub the drop well over the film of blood taking care not to pass from one half of the film to the other without sterilizing the needle On one slide carefully place a cover glass on each half, taking care that the two cover glasses are well separated in the middle by the mark of the grease pencil Place the other slide on a piece of wet blotting paper, and cover with a Petri dish to prevent evaporation for a period of fifteen to twenty minutes At the end of that time dry carefully over the flame, and then stain Examine both halves of the first slide under a moderately low power At the end of fifteen minutes (often much sooner) distinct clumps of agglutinated bacilli will be seen, provided the case be one of typhoid or the blood of one who has been prophylactively inoculated with a typhoid vaccine, while on the other half, the control, the bacilli show no signs of clumping The red cells are practically invisible, but the leukocytes are clearly defined and it is quite easy, provided the film has been thin, to determine the presence or absence of leukocytosis and to make, if necessary, a differential count of the various forms of white cells present

Lancet, London

May 13 I No 4837 pp 981 1024

8 Links in Chain of Research on Syphilis. J E R McDonagh
9 *Malignant Disease of Nose or Accessory Sinuses S Thomson.
10 Removal of Foreign Bodies From Esophagus and Bronchi I Moore.
11 *Presence of Lead in Urine in Four Cases of Trench Nephritis C P White
12 Unusual Case of Esophageal Cast. F H. Jacob
13 Case of Pleuropneumonia Treated With Phylacogen. F Collins

9 **Malignant Disease of Nose or Accessory Sinuses**—The advantages of Moure's operation or lateral rhinotomy of the nose or accessory sinuses (through the face) are emphasized by Thomson and two cases are cited In the first an endothelioma of the ethmoid and antrum There has been no recurrence after five and a half years The second case was one of epithelioma of left maxillary antrum Moure's operation was done and there has been no recurrence after three and a half years

11 **Lead in Urine in Trench Nephritis**—White examined five specimens from trench nephritis (two of them from the same case at different times), two specimens from ordinary nephritis each of them the mixed urines from two cases and a normal urine to serve as a blank experiment Lead was present in all the specimens from trench nephritis and in one of the mixed urines of ordinary nephritis Iron was present in all the nephritic specimens and copper in most of them Tin was also present in one specimen This was the most recent case and contained more lead than the others A specimen from the same case a month later contained less lead, and tin was not found White has come to the conclusion that copper is universally present in the tissues and he has found it in normal urine to the extent of 0.2 mg per liter The iron he says can be attributed to the blood which was present in all cases and possibly to the medicinal administration of iron. The presence of lead and tin in urine, however he regards as abnormal The constant presence of lead in these cases and the presence of tin in one of them suggests the possibility of the metals being derived from canned foods

Bulletin de l'Académie de Médecine, Paris

May 2, LXXV, No 18, pp 491 555

14 *Abortive Treatment of Infection and Early Closing of War Wounds (Desinfection et fermeture rapides des blessures de guerre Resultats) G Dehelly

15 *Operative Treatment of Detachment of the Retina (Le traitement du decollement de la rétine et des choroidites exsudatives d'origine traumatique) Bonnefon

16 Gangrenous Process Over Arm and Back Following Vaccination of Adult Against Smallpox (Cas de vaste gangrene phagedenique probablement causee par le ' Bacillus pyocyaneus," a la suite de la vaccine) Balzer and E Moulard

14 **Early Closure of War Wounds**—Dehelly is surgeon at the hospital in charge of Carrel at Compiegne He relates the ultimate outcome of Carrel's method of treating war wounds in 48 out of 76 cases The 48 men had a total of 155 wounds, including a number with fractured bones One hundred thirty-five of the wounds were closed before granulation had begun (See abstract 36, The Journal, May 13, 1916, p 1586) Of the 121 wounds closed before the twelfth day, healing was complete in less than thirty days in 119 This list includes 18 of the 22 with fracture Of the total 155 wounds, it was thus found possible to close up early all but 12 6 per cent and of the 135 thus closed, 88 25 per cent were entirely healed by the end of the month He adds that this shortening by two thirds the average healing period is far from being the only advantage of the Carrel method The sterilization is so thorough that the lymph glands and bone surfaces heal without inflammation and hence there is no tendency to muscular contraction or stiffness from cicatricial tissue The coaptation of the normal tissues causes them to grow together, retaining their suppleness, without an intervening stiff wall of scar tissue as when wounds are left to grow up spontaneously

15 **Surgical Treatment of Traumatic Detachment of the Retina**—Bonnefon emphasizes the way in which the war experiences are confirming the relative harmlessness of detachment of the retina following a trauma in comparison to that of endogenous origin The condition is indispensable, however *that treatment be applied at once The retina loses* its vitality so rapidly after detachment that it must be restored to place on the spot By the time the man reaches the base hospital the retina is injured beyond repair He has cured completely three cases of extensive detachment of the retina with reduction of vision to perception of light He obtains access by severing one of the rectus muscles as for an advancement operation The region of the equator thus exposed is punctured deep at one or two points with the fine tip of the actual cautery at red heat Two stitches are taken including muscle, aponeurosis and conjunctiva, to repair the breach, then absolute rest in bed, immobilization and atropin The suture threads are removed the fifth day, and a few subconjunctival injections of saline after the eighth day may aid In one of his cases vision had been reduced to perception of light *but by the sixth day there was no visible trace* of the detachment and visual acuity was 8/10 and became finally 8/10 and has persisted unimpaired during the three months since to date This ignipuncture revulsion he has also found useful in treatment of contusion of the eyeball with intra-ocular effusion It promotes absorption of an effusion either on the retina or in the vitreous body In conclusion he reiterates the importance of promptness, saying that treatment of detachment of the retina is the only intervention on the eyes which should be undertaken at the front

Presse Médicale, Paris

May 4, XXIV, No 25, pp 193 200

17 The Various Aspects of War Surgery R Le Fort

18 Gas Gangrene in War Wounds E Sacquepee

May 8, No 26, pp 201 208

19 *Prophylaxis of Spread of Infectious Diseases (La methode de Milne et la propagation des maladies contagieuses) G H Lemoine and Devin

20 Combined Arsenic Mercury Treatment of Syphilis Fevre and Longin

21 *Technic for Hypochlorite Sterilization of War Wounds (Sterilisation des blessures de guerre, technique) G Dehelly and Dumas

19 Already summarized as it appeared elsewhere See abstract 39, p 1602

21 **Continuous Irrigation Method of Treating Wounds**—This article is practically a continuation of the one reviewed above, abstract 14 The exact technic for the continuous irrigation is here described Figure 1 shows the glass receptacle holding up to 1 liter of Dakin's hypochlorite solution, and the rubber tube, 2 meters long, with an interposed glass drop-counter about 20 cm below the receptacle Figure 2 shows the rubber tube about 25 cm long and Figure 3 a section of the same These short tubes are used of various diameters The lower end is tied and above that the tube is perforated, and is fitted with the sponge tissue which is sewed solidly to the wall of the tube and closed below to form a bag Other tubes are used to drain away the fluid They are about 25 or 35 cm long and have no side perforations The dressings used are made of carded cotton with a thin layer of absorbent cotton and the whole is wrapped in gauze The dressing when finished is about 3 cm thick and is passed once entirely around the limb The aim is to have the sterilizing solution in constant contact with every part of the wound all the time For a superficial wound all that is necessary is to cover the wound with a single layer of gauze and lay along over the wound, above this, one of the rubber tubes perforated with minute holes the length of the wound This keeps the entire wound well moistened, the single layer of gauze not permitting secretions to accumulate under it while it prevents the holes in the tube from becoming obstructed A deep cavity with small opening is treated with tubes perforated only close to the tip Enough are used to carry one into every compartment of the wound, as shown in a cut The fluid entering below pours out of the opening above It may be *necessary to introduce a gauze wick* with the tube, to hold the tissues apart enough for this to occur, or the tube may be wrapped with gauze to hold back the fluid if the wound is emptied by gravity too rapidly

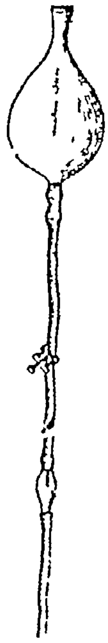
Figure 1

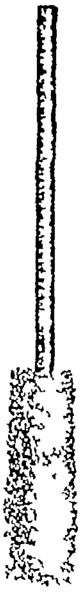
Figure 2

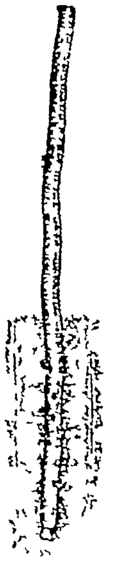
Figure 3

The receptacle stands on a shelf fastened to the foot or head of the bed, and there must be as many receptacles as there are tubes used for the irrigation The connecting tube is attached to the tube in the wound as soon as the wounded patient is placed in bed Attempts to divert the fluid from a single irrigator into more than one tube always proved a failure If the tube in the wound becomes blocked with a clot, it should be syringed free For a small cavity, 5 drops a minute have proved ample For a large wound, 20 drops is the rule The attendant must *ascertain that the wound* is thoroughly irrigated throughout but that the bed is not wet The cotton dressing is changed twice a day The skin around is protected with petrolatum The continuous sterilization is kept up for three or four days Bacteriologic examination of swabs will confirm the progressive diminution in the number of germs suspected from the clinical aspect

When the microbes have disappeared from the secretions, the instillation tubes are removed and a gently compressing dressing is applied The next day, if there has been no oozing from the depths, the cavity below may be regarded as closed, only the skin still gapes and the lips of the wound are brought together This can usually be done by the fifth day It is better to draw them together with strips of plaster than to suture as this permits coaptating all parts of the wound and by applying the compression all around the limb helps to close all the cavities below Strips about 20 or 25 cm long by 3 or 4 cm wide are used Half of the strip is stuck to the limb on one side of the wound and then, as the lips are brought together, the rest is wound around the other half of the limb For very large wounds, two strips of plaster 7 or 8 cm wide are used, fitted with a row of hooks such as are seen on men's shoes The wound is then laced up like a shoe The lacing is done with heavy rubber bands like those used in boys' slings The traction from the rubber soon draws the lips together The plaster strips are kept in place, like sutures for five or six days If it becomes necessary on account of oozing to undo them at any point, great care is taken not to disturb the healing processes

Revue Médicale de la Suisse Romande, Geneva

April XXXVI No 4 pp 209 272

22 Means to Detect Simulation of Blindness (De la simulation de l amaurose et de l amblyopie) T de Speyr
23 *Prophylactic Heliotherapy (La cure de soleil preventive) L. Jeanneret
24 *Dosage of Polypeptids and Amino Acids in the Blood (Le dosage des polypeptides et des acides aminés dans le sang) J Amann
25 *Charcoal as Source of Error in Tests for Occult Blood (Le charbon comme cause d erreur dans la recherche chimique du sang dans les selles) A Rapin
26 *Hydrorrhea During Pregnancy L. Du Pan
27 *Ultimate Outcome of Thyroid Autograft E. Kummer

23 **"Preventive Sun Cure"**—Every day one or more groups of from twenty to thirty children gather at a certain spot in their quarter where a guide and assistant meet them and conduct the party to the banks of a lake not far from town Here they spend the afternoon in games and gymnastic exercises clothed only in bathing trunks The aim is to apply Rollier s system of heliotherapy as perfectly in the limited time afforded as is possible, and the work is all modeled on that in his institution It was organized a year ago by Dr L Jeanneret for the more delicate schoolchildren of the city of Basel and it has proved successful beyond all anticipations He advertised for helpers in the papers, asking young men or young women to give up one afternoon in each two weeks to a group of frail children to help make them robust. Reflection from the lake doubles or triples the effect of the sunlight There were only five days during the entire summer in which the trips could not be made on account of the weather A group of children too small to take the half-hour walk were provided with a sanded and fenced space for the purpose in one of the public parks in town A regular system was followed each day, the walk to the lake then rest or quiet games then gymnastics and games of all kinds Efforts are made to train the children in good habits of breathing The chest diameter of the 200 children increased by 2 03 cm on an average between July 14 and September 4, and the average increase in weight was 825 gm Only four children failed to show this increase The entire expense from May to October was about $21 When cold weather came the children had their walk and the games Saturdays, but they did not remove their clothing Jeanneret urges that gymnastic exercises in schools should be taken with the trunk bare and in the open air when possible

24 **Dosage of Amino Acids and Polypeptids in the Blood**—Amann has worked out a technic which requires only 1 c c of blood serum for the colorimetric quantitative test for amino acids as a supplement to the Abderhalden ninhydrin test The test takes only a few minutes and comparison of the amino acid content of the blood and of the urine may throw light on the functional capacity of the kidneys He regards dialysis as the most reliable means to remove the albumin from the serum

25 **Charcoal as Source of Error in Testing for Occult Blood**—Rapin has found that the charcoal given to mark off the feces or for therapeutic purposes is liable to prove misleading Even in minute proportions it acts as a catalyzer with the Weber, Adler and Meyer tests for occult blood He tests for occult blood by triturating in a mortar a little of the feces and solid benzidin with 1 or 2 c.c glacial acetic acid Then he adds 2 or 3 drops of peroxid of hydrogen and mixes it well. A change to a blue tint shows up even very minute traces of blood He warns that the salts of metals act as catalyzers, and hence this source of error must be eliminated beforehand Raw milk, certain ferments and certain drugs also have a catalyzing action, and with these known sources of error he now lists charcoal Even traces of charcoal may cause a misleading positive reaction

26 **Hydrorrhea During Pregnancy**—Du Pan reports three cases In two the hydrorrhea was evidently traceable to a pre-existing metritis which induced a pathologic secretion This accumulating between the ovum and the uterus wall, was the cause of the placenta becoming detached at this point This entailed slight hemorrhage and contractions of the uterus, soon subsiding under rest in bed The hydrorrhea may thus be regarded as of decidual origin in these cases, but in the third case there were traces of blood during the first two months at times corresponding to the menstrual periods, and during the following months there was a small watery discharge at these periods At delivery only two or three tablespoonfuls of fluid were found in the bag of waters He ascribes these phenomena to some slight early detachment of the placenta from contraction of the uterus at the time of the menstrual periods The membranes were evidently torn a little during this, and later at each recurrence of the time corresponding to the menstrual periods, the contractions of the uterus pumped out a little of the amniotic fluid The laceration must have been so high up that no fluid escaped from it spontaneously

27 **Thyroid Autograft.**—Kummer's patient was a woman of 36 with bilateral goiter compressing the trachea and extending outward beyond the ears Both lobes were removed nearly completely but the structure of the thyroid seemed normal at certain points, and some segments of this were implanted under the skin over the right acromion by Cristiani's technic The portion of the thyroid left undisturbed gradually enlarged as also the grafts in the acromion region A scrap of the graft was excised three years later, and the microscope confirmed that it had not only taken root but had proliferated The result, he says, was a kind of small neothyroid gland which had apparently shared in the total functioning of the thyroid gland Nine years later, that is twelve years after the operation another scrap was excised, and the findings confirmed that the graft had continued its functioning No sign of inflammation had been observed at any time The case is illustrated

Correspondenz-Blatt für Schweizer Aerzte, Basel

April 22 XLVI No 17 pp 513 544

28 Experiences in Hygienic Mission in Serbia (Aus meinen Erlebnissen als Hygieniker in Serbien) L Hirschfeld

Pediatria, Naples

April XXIV No 4 pp 193 256

29 *Lymphogranulomatosis in Boy of Five With Necropsy (Un caso di linfogranulomatosi infantile) A F Canelli
30 Alkaptonuria From Birth in Girl of Six (Contributo allo studio dell alkaptonuria nell infanzia.) S Maggiore

May No 5 pp 257 320

31 *Operative Treatmentt of Congenital Stenosis of the Pylorus (La stenosi spastica ipertrofica congenita del piloro e l operazione di Rammstedt.) H K. Hirschfeld
32 *Addison s Disease in Girl of Ten G Rutelli
33 Present Status of Treatment of Spasmophilia O Cozzolino

29 **Lymphogranulomatosis in Child**—The history of infantile lymphogranulomatosis is reviewed and a case described with illustrations of the necropsy findings The patient was a girl of 5 and the disease ran its fatal subacute course in seven months with high fever and anemia but no hemorrhagic tendency The histologic findings are discussed with much detail, comparing them with similar cases on record The lungs showed miliary tuberculosis and atypical tuberculosis was evident in the lymph glands in the neck and lungs, lumbar and aortic regions and mesentery Canelli adds a bibliography with titles in full of 159 articles on the subject, including a number from America

31 **Operative Treatment of Congenital Stenosis of the Pylorus**—Hirschfeld writes from Zurich to extol the benefits of Rammstedt s operation in rebellious cases of congenital

spastic stenosis with hypertrophy of the pylorus She discusses the clinical picture and the various other measures that have been proposed to correct it Rammstedt applied Weber's partial pyloroplastics in 1911, but found that the vomiting kept up afterward In later cases he refrained from suturing the flaps and merely fastened a piece of omentum between them This modification solved the problem, and the operation has proved unfailingly successful in his and others' hands The musculature of the pyloric ring is incised lengthwise down to the mucosa, without opening the latter The lips of the incision are not sutured, the pylorus is reduced and the abdomen closed In the three cases reported the children were all males, all but one breast fed, and the signs of the stenosis became apparent the second or third week The two preceding children in one of the families had also had this congenital stenosis of the pylorus One succumbed and one recovered under internal measures alone In all the cases the Rammstedt operation proved simple and harmless, even in the great debility of these children, and it was undoubtedly a life-saving measure

32 **Addison's Disease in Little Girl**—The tendency to bronzing was first noticed at about the age of 4 At 10 it was extremely pronounced, while the blood pressure was rather low and the child was growing progressively weaker The appetite and digestion have always been good and the child has kept well nourished throughout The hemoglobin and red count are normal Tests for malaria and syphilis were constantly negative, but the Pirquet tuberculin skin test was strongly positive An older child in the family had died of tuberculosis and the little patient had a history of enlarged glands in the neck and spina ventosa The urine findings were apparently normal except for slightly subnormal figures for uric acid (0 3 1,000) and for creatinin (0.2 1,000)

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34 Vertebral Caries (Consideraciones sobre el mal de Pott) J M Jorge
35 Correction of Abnormally Large Genital Vestibular Canal (Caso de deformacion genital externa en la mujer por detencion en la evolucion morfologica) J Salvador
36 Antigonococcus Vaccine G G Soldevilla

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37 Serotherapy of Pneumococcus Disease (25 casos recopilados de neumonia fibrinosa tratados por el Haptinogeno Neumo) H Dasso

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38 *Cesarean Section on Account of Tumor (Cesarea segmentaria suprasinfisiaria E Zarate
39 *Paralysis From Vertebral Tuberculosis (Paraplegias potticas) J M Jorge
40 Treatment of Whooping Cough by Subcutaneous Injection of Extract of Patient's Sputum (Etiologia y tratamiento de la coqueluche) J Melfi
41 To Protect Schoolchildren Against Malaria in Malarial Countries (Higiene antimalarica escolar) E Cacace

38 **Cesarean Section on Account of Tumor**—In Zarate's case a tumor in front of the promontory impeded delivery and he extracted the child by an incision in the lower segment of the uterus according to the Fromme-Fraipont technics The peritoneum had been sutured together above to shut off the peritoneal cavity, and the operation was extremely simple and easy, with very little loss of blood The wound soon healed, with no impairment of the movability of the uterus

39 **Paralysis from Vertebral Tuberculosis**—Jorge discusses Pott's disease in general and a typical case in particular, theorizing as to causes, treatment, etc Malignant tumors and parasitic cysts in the spine might present neuralgic, radiating pains like those in Pott's disease, but the pain is generally more intense At a more advanced stage there may be motor, sensory and trophic manifestations as with vertebral caries, but the clinical picture is quite distinct Syphilis, on the other hand, may present a practically identical clinical picture, especially as a tardy manifestation of inherited syphilis The child may be apparently healthy until approaching puberty, when the gait may gradually assume the spastic type and the spine become semirigid with exaggeration of the tendon reflexes Lumbar puncture may reveal lymphocytosis and the positive Wassermann reaction will confirm the diagnosis of tardy syphilis Roentgenoscopy should never be omitted in these cases, but does not always give decisive findings Paraplegia following an acute infectious disease generally subsides in a few weeks of repose The spine is flexible in these cases In all spinal troubles, Jorge remarks in conclusion, the surgeon should bear the possible medical affections in mind, and the clinician should never forget the possibility of vertebral tuberculosis alone or associated with other trouble

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42 *Epidemic Cerebrospinal Meningitis J P Bijl and R N M Eykel
43 Experimental Research on Vaccinal Allergy R P Van de Kasteele

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44 *Importance of Immunity, Allergy and the Tuberculin Reaction for Dermatology (Iets over de beteekenis der immuniteit, allergie en de Moro reactie voor de dermatologie) W L. L. Carol Concluded in No 18
45 Increase in Height of Male Population of the Netherlands (De toeneming der lichaamslengte van de mannelijke bevolking in Nederland) A M Benders
46 Lipoma in an Inguinal Hernia in a Woman. (Een eigenaardig geval van liesbreuk bij een vrouw) J H Hoogenboom

42 **Epidemic Meningitis**—Bijl is chief of the public health service and he here reviews the experiences in the Netherlands with epidemic cerebrospinal meningitis during the last ten years There were no cases known in 1914, but fifty four were reported in 1915 with a mortality of 92 per cent without serum treatment, and of 30 per cent with it The incubation period was less than three days in some and over five days in others Prussia had several hundreds of cases during this same year and England in the first seven months of the year had recorded 3,378 Bijl warns physicians in general to be on the lookout for imported meningitis, and that lumbar puncture should be done on mere suspicion of the disease The fluid is examined free of charge at the central laboratory, and the trained officials of the public health service are empowered to assist the general practitioner in doing lumbar puncture on civilians on request He suggests that the germs may linger in the accessory sinuses of the nose after clinical recovery It is wise to commence serotherapy in severe cases without waiting for bacteriologic confirmation of the diagnosis The anti serum usually should be injected daily for three days in succession, and then every day or second day One soldier recovered after six injections, one girl of 6 after four An English exchange reports recovery after seventeen injections in one case In some of the Netherlands cases the patient might have recovered under the serotherapy if it had been commenced earlier or the doses had been larger or the intervals shorter April and May are called the "meningitis months" Repeated examination seldom disclosed a carrier in the environment but one "contact" was found whose serum agglutinated meningococci, although none could be discovered in his nasal secretions Agglutination is not a positive sign of infection, but it may corroborate other signs In one family the three smaller children developed meningitis within two days No meningococci could be found in the nasal secretions of the parents and other children examined the sixth day, but the serum of all agglutinated at 1 50.

44 **The Tuberculin Ointment Reaction in Dermatology**—Carol devotes nine pages to a tabulation of the details of fifty cases of various skin affections tested by the Pirquet tuberculin skin test and the Moro percutaneous tuberculin ointment test A specific reaction was obtained regularly with lichen scrofulosorum, occasionally with tuberculids and repeatedly in the one case of lichen nitidus With syphilids, the tests were usually negative, but occasionally a positive response was elicited He reports further much benefit from the tuberculin treatment according to the Sahli-Ponndorf technic in cases of papulonecrotic tuberculids and of erythema induratum, although with the latter the bed rest was undoubtedly an important factor in the improvement.

Hygiea, Stockholm

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47 Prophylaxis of Disease in Swedish Barracks (Sjukligheten i våra kaserner och dess bekampande) A Brinke

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FURTHER REFLECTIONS OF A MEDICAL TEACHER *

W T COUNCILMAN MD
BOSTON

The occasion brings to my mind an address which I heard, not in this noble hall, but in the building on the corner of St Paul and Saratoga streets, nearly forty years ago I had just graduated at the Maryland University, was working in the laboratory of Newell Martin in the Johns Hopkins University, and had come under the spell of the man and the place. The address by S Weir Mitchell a name equally renowned in medicine and literature, both in the subject matter and the grace of expression, made a deep and lasting impression on me I very well remember the general subject concerned the renewal of the tissues, particularly the nervous tissue, after too great wear, and he showed the importance of exactly determining, not so much the nature of the disease as the condition of the diseased individual He spoke also of the use of rational, but not necessarily pharmacologic, remedies, among which rest occupied a prominent place, to assist in the restoration to the normal It was a view of disease which the medical student at that time did not have revealed to him, but which has now become fully recognized I regret that I cannot hope to say anything that will be so remembered

Some years ago, and the years now pass with such accelerating rapidity that the period seems remote, I gave an address entitled "Reflections of a Medical Teacher" Now, having attained greater age, a wider experience having given more material to reflect on, and having possibly wasted much time in reflection, to which I always devote a very delightful ten minutes after breakfast, I propose to speak to you today "On Some Further Reflections of a Medical Teacher" I find that my reflections follow along much the same lines as in the former address, though the views expressed there have in some cases undergone some alteration and repair, and in others have become deeper and stronger

In teaching one is concerned, first, with the material, just as a farmer must consider first the character of the soil he tills, virgin soil, moreover, rarely presents itself to his hand, his fields have been tilled by previous possessors, sometimes the process enhancing, often injuring, the quality of the land, and what he does is influenced by the previous culture Continuing the agricultural simile, we are secondly concerned with the tiller, his selection and training and his ability for his job The third point is what sort of a crop he wishes to produce, and the fourth, what methods of culture he pursues

During the thirty-five years of my life as a teacher I have come into pretty close relations with a large number of young men from all parts of this country, and a few from foriegn countries, of the average age of over twenty-three and representing all kinds, both as to degree and quality of intellectual tillage It seems almost absurd and indicative of a very faulty method in our educational system that these men should not earlier acquire the training which is supposed to fit them for the serious work of life

While this is not the time when we should regard everything in the German system, as judged by some of the activities resulting therefrom, as worthy of imitation, nevertheless the difference in the character of the early education in Germany as compared with ours is striking, and I think not in our favor Some years ago while visiting a friend in Germany I had the opportunity of seeing something of the German method at close range The son, a vigorous youngster of 15 who was shortly to enter the gymnasium, spent in school thirty-four hours weekly, this including two hours of field-work in botany and two hours of religious instruction In addition to this, he spent two hours daily in the evening in preparation In the gymnasium the drill is fully as strenuous, and when the boy leaves this to enter the university he is fully two and a half years ahead of an American boy of a corresponding age, his education has been conducted along rigid lines and is thorough

The boy spoken of had a fair knowledge of French and English and had been drilled in Latin to an extent that he was able to carry on a conversation with his father in that language In history he was thoroughly steeped in that of the German Empire from the Treitsche point of view, but of the wider aspects of history he had little His point of view had been absolutly formed for him and he had imbibed the Treitsche principles as a part of the sermon on the mount What particularly interested me was his outdoor education, as revealed in the course of a long tramp we had together in the mountains, and which he had acquired as a part of his school-work He knew the plants, the trees, the geology and topography of the country, the traditions and history associated with the region, and with and through this knowledge had acquired a love of home and country which we rarely see Of athletics, he had the gymnastic drill in the school, which seemed to keep his body in good condition

The religious instruction was obligatory, but there was a choice between the Roman Catholic and the Protestant point of view The father talked to me seriously about the choice, and had concluded, not

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* Address delivered before the Medical and Chirurgical Faculty of Maryland

from the point of view of conviction, but from that of the material advantage to his son, that, since he might possibly enter into the Austrian service, it would be better for him to choose the Roman Catholic side Of course the disadvantages of such a system as this, in which the boy at the period of lasting impression is rigidly trained in a system which has the state and not the individual primarily in view, are sufficiently obvious, but these disadvantages are not necessarily associated with the system There is no reason why the historical and political instruction should not be as free as the botanical

My reflections have led me to believe that it is in these early years that our educational system is most defective and will be most difficult to remedy In contrast with this German boy, I think also of another friend's son, a boy with whom I was accustomed to talk when on my way to a club, where at stray times I endeavored to play golf The boy, 16 years of age, pursuing his studies at a private school which prepared boys for college, played a fair game of golf and could talk of the game with some degree of interest, but knew nothing of its historical development or of the physical principles involved in its pursuit Apart from a very superficial knowledge of one form of athletics, he seemed to have acquired little or nothing, indeed, I could not ascertain that he had ever voluntarily read a book This early education is of vital interest to the teachers of medicine, for, in the first place, the age period at which men enter into medicine must be lowered, and the colleges can not turn out men with the training we require from the material they receive There would seem to be hope in the large private schools of the country, but none of these could exist if they made adequate demands on their students, and there is, furthermore, a lack of properly qualified teachers

There is no profession of teaching in this country and there are no rewards, either pecuniary or in position, on which such a profession could be based Even in the private schools teachers are selected rather on a basis of athletics and social qualifications than on the ability to train and inspire youth The possession of a "Ph D " is also regarded as one of the desirable qualifications of a teacher, it looks well in school catalogues and certainly should not be held to be detrimental, but the character of work which the degree demands in no way qualifies a man to teach How much better it would be for him to spend the time under a competent master in the study and practical exercise of teaching Every one engaged in the tillage of the soil must study its character

During a part of my teaching career my class included both those who had passed through college and had acquired the A B degree and those who entered the school after fulfilling certain more or less definite entrance requirements Harvard having required the A B degree as a condition for entrance into the medical school since 1900,[1] my experience has been more extensive with students who have the degree As far as I have been able to learn by careful study of results, on the whole the A B men are the better In judging the material of college training one cannot say offhand whether the better material which comes from the college is due entirely to the training received there The college has a certain advantage in that its material represents a selection It embraces the congenital rich, others whose immediate forebears by the exercise of energy and thrift have accumulated sufficient means to give their sons a college course, and a large number of young men who by great sacrifices and hard work earn the money necessary

On the whole, the hereditary element also will favor the college man There are differences in environment of the three classes, so many advantages and disadvantages connected with each, that I am not sure whether it is better for a young man to select his great grandfather to meet his college expenses, or to place the burden upon the thrifty father, or to depend on his own efforts I found also in my previous inquiry that there was little difference in the best men whether they had or had not the degree, but the average was cut down by the poor men, who were most numerous in those without the degree Much depends on how the years which the college represents have been passed, and one can easily see ways in which they may be spent as advantageously or more so than in college A man, however, does acquire in college certain traits difficult to characterize affecting his human relations and of advantage to his future career in any line whatever

As I look back on my life and the friends I have made, many of them having attained distinction, I find that a large proportion have not had the college degree It must be remembered, however, that the attainment of the college degree is becoming progressively more easy and that most of these men at present would have gone through college

I have been greatly impressed with the evidence which college men often present of a lack of thoroughness in the instruction they have received After two or more years of study of French and German, for instance, they have acquired no facility in the use of the language They are also incapable of close and accurate observation and show a singular lack of facility and clearness of description This comes out strikingly in one of the exercises of my course, in which the students are required to study under the microscope sections of diseased tissues with which they are not familiar and to give written descriptions of the conditions present I have been reading these papers now for many years, each year with a hope that is continually disappointed, for it is difficult to believe that an education of twenty-three years can show so little effect One learns almost to classify the students by the chirography This is for the most part indistinct, without character, often only the beginning of a word written out, leaving the remainder to be guessed at The matter is badly expressed, often obscure, diffuse and too voluminous The greatest lack is an unfamiliarity with the methods which even the savage would use to obtain knowledge of an object The method of analysis, the resolution of a problem into its single components, the study of these and the reassembling must be taught over and over again A boy should in the beginning be taught to write legibly and to express himself clearly and succinctly The only use students seem to know of books is to obtain by study the knowledge which is recorded within their pages, not to expand the knowledge they have acquired by the study of nature They seem to have but little enthusiasm, little curiosity to know Certainly a large part of a student's first years in a medical school is taken up with acquiring methods of study

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[1] This has recently been modified to the extent that two years of college work are accepted, provided the standing of the student be high and the instruction of a certain character

I remember that in a discussion on the subject of the desirableness of modifying to some extent the A B requirement a well-known professor of psychology objected to the proposition on the ground that the college degree indicated the possession of culture and that the lack of this desirable commodity would place the medical profession at a disadvantage as compared with the law, for the lawyers would have the degree and culture It is possible to define culture as a state of mind which enables its possessor to recognize, appreciate and enjoy the best product of man's work in any direction, whether in literature, art or science Culture is acquired, who can say how Often when not consciously sought, and often when sought, it flees the pursuer It is probably more often associated with the A B degree than not, and in the class seeking the college, heredity and environment are fully as important elements of culture as the college course Certainly, as far as culture involves a knowledge and appreciation of literature the college men often seem to lack this part of it[2]

The men, on the whole, are conscientious, they try to work, but they are childish and those methods of instruction which are unfortunately most used in the primary schools make the strongest appeal to them They prefer assigned lessons, textbook recitations, and what are termed "quizzes" on lectures I am accustomed each year, at the termination of the course, to ask of the class a criticism of both the matter taught and the method Occasionally I have gotten very admirable, well-considered reports, containing suggestions which have been adopted with advantage As a stimulus to the class I have been excusing from examination at the end those men who have shown excellence as determined by the weekly written work This year the students have asked that this method be discontinued, on the ground that if no examination is given they would miss the valuable review made necessary in preparing for the examination Of course what I have said does not apply to the entire class, a large number of whom are all that could be desired as students, since those giving the impression of the normal are probably not sufficiently considered in estimating the average, for after all, the abnormal makes the greater impression

I have thought that something might be learned from a statistical inquiry regarding the colleges where the men were educated previous to their entry into the school To this end I have gone over the graduating classes of the last ten years, taken the standing of the men while in the school and compared this with the colleges Previously I had made the same inquiry based on the standing of the students in pathology alone The results are similar The number of educational institutions represented, 105, seems to be all-embracing, but of these, sixty-two gave us but one student apiece, and thirteen but two each Occasionally the single representative of a college is an exceedingly good man, but the general average from these colleges is low Most of our men come from the well-known colleges in New England, Harvard of course leading These men all averaged very closely, there being a difference of only 3 86 per cent in the standing between the highest and the lowest Whether such a small figure has much meaning is doubtful, although the numbers were sufficient as to do away with the effect of very low and very high standing of individuals The sectarian colleges fell 7 27 below the average of the New England nonsectarian colleges, but the whole average was not so marked as in pathology alone Here again it is difficult to say that the character of the education received in the sectarian college is alone responsible, for the college population in these is largely represented by a race which, though abounding in admirable qualities, has not been prolific in the production of men of science

The unfortunately small number of men whom we have received from the New England institutes of technology averages a little better than those from the colleges one institute bing 3 1 better It is rather interesting that the product of all these institutions should average so closely, but the methods of teaching are similar in each, and the men who go into medicine are fairly representative of the product The inquiry also considered relative standing of the men from the different parts of the country The men from New England were so greatly in excess to give but little value to the result As compared with the other localities represented, however, New England stood 1 92 higher

I still remain one of those who believe that teaching is a calling which if engaged in should be the paramount interest in life, that it is a responsible, serious and noble calling, and I regret the tendency which seems to prevail of disregarding teaching as a career I have become aware of this in several ways Numbers of men from my laboratory, after serving as assistants for about two years, have taken positions elsewhere In the inquiries for men from other institutions, the ability to teach, and this means much both in the way of natural qualifications and training, is seldom inquired into, or at least little stress is laid upon it in the list of accomplishments demanded for small pay

The young men themselves in seeking positions make very definite demands as to the hours which are to be devoted to teaching Their ideal seems to be a life devoted to research Why not research with teaching? Research is of fundamental importance for the teacher, the knowledge which he acquires from the study of nature is living, it is his very own and he can give it, together with the inspiration which has directed his search What a change has taken place in the point of view of teaching and research during the past forty years Research has now become dominant, it gives the individual pecuniary reward, place and position, it gives the institution reputation and endowments It has been possible to apply the knowledge which has come from research to the prolongation of life, to the alleviation of human misery, this knowledge has also made habitable large and productive regions of the earth by the destruction of endemic diseases, and has in many ways enormously increased man's power in the use of the natural forces Its pursuit conduces to pleasure and the joy of life, other pleasures pale in contrast with that which the worker experiences when the solution of a problem to which he has given concentrated effort appears at hand. This it seems to me is the real fascination which research exerts, and when this is combined with rewards so much greater than can be obtained by teaching it cannot be wondered that it makes the stronger claim.

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[2] It is of course not to be commended that a lecturer on a medical subject should garnish his discourse with classical allusions but it sometimes is difficult to avoid it and the result is apt to be disappointing I remember that once when beginning some lectures on malformations it seemed to me eminently appropriate to begin the course by reading the first chapter of Tristram Shandy This is amusing interesting and instructive in that it gives an example of an abnormal course of development being initiated by the simple question which was propounded by Mrs Shandy As I proceeded to read the chapter an expression of utter bewilderment came over the faces, and I am sure that the bearing of Mrs Shandy's question was entirely lost. On another occasion it seemed to me that it might be well to introduce the subject by some allusion to Greek mythology by showing that such conceptions as the Cyclops the Janus and Cerberus could never have arisen as a creation of the imagination, but were based on the existence of these forms in the malformations It is very difficult to speak of the Cyclops without mentioning Polyphemus and at the name the expression of bewilderment I have so often seen passed over the faces After the first experience I asked one of the assistants if he had ever read Tristram Shandy and he said he didn t remember but he probably had for he read many books when a child

Individuals who have amassed fabulous wealth by measures which really seem simple, provided the natural endowment which makes possible their exclusive pursuit is at hand, have been led to apply parts of this wealth to the creation of institutes for research. Scientific research is a curious plant; it flourishes alike in the stony desert and in the hothouses; it is largely independent of environment and sometimes does not well bear transplantation. Under this stimulus to research, affecting the individual, the university, and the institute, it has enormously developed, to the extent that no one can keep pace with the literature in a single main subject. It is comparatively easy to increase quantity of a product, but the increase of quality is not so easy. To some of us the expression of organization of research, its creation at any spot under any circumstances, provided pecuniary means are at hand, seems rather shocking; it is true that the output of poetry and painting under such conditions might be greatly increased, but there might be some fear as to its quality. Poetry is useful to man; it has undoubtedly contributed to his happiness and has even alleviated human misery; but no magnate has ever made the experiment, which would be a very interesting one, of the creation of an institute to increase the output of this desirable product, of which the world at present is in great need.

These enormously endowed institutes can put out such a mass of research, and the primary and often sole measure is volume, that the university as a place where knowledge is advanced suffers in comparison. The institutes, moreover, attract young men in the most fertile periods of life, and offer greater emolument than the university, and freedom from what is too often regarded as the drudgery of teaching. The university, in comparison, falls somewhat behind in public esteem, and particularly so in that the institute is not disposed to hide its activities behind a modest veil. It must tell the public its accomplishments, because Croesus seeks to justify his appropriation of wealth by devoting some of it to a useful purpose. The university also seeks to meet this competition of the institute by increasing its volume of research output, and in various ways seeks to inform the public of its activities.

One leading university in the country goes so far in this direction as to publish the titles of the papers of all who have been in any way connected with it, no matter where the work was done, thus claiming that through the one time association of the author with the university this has in some way stimulated the production. The university has also created positions almost exclusively for research, which is very unfair to its teaching force, for there is too great a tendency to judge men solely by the standard of volume of output. The university has its place in training the individual by research and otherwise, toward the development of the best that is in him. The institute fills a proper place in providing facilities for research, and there are always those who will find there a suitable environment.

Teaching, however, should not be, and never has been, a bar to research, for student and teacher should seek knowledge together, and pedagogy involves so much of the unknown that to engage conscientiously in it is a form of research. Many of the great teachers I have known have been both teachers and investigators, and in both directions stimulating. There is too great a tendency to regard research and publication as synonymous. It is a laudable reputation to be known as a contributor to knowledge, and while teaching may impede publication, it is, if properly pursued, a stimulus to research. There are rewards, intangible, it is true, but the more valuable, which come to the teacher only. Who of us cannot remember certain teachers who have exerted an influence lasting through life, which has in some way made us better men?

It is difficult to attempt to define what should be the relation between teaching and research. There is at present an undoubted tendency to the separation of the two. Everything favors the man who holds research as an exclusive ideal and makes teaching a secondary consideration. There are men of wide vision, ingenious in devising methods, of great power of concentration, who are able to single out sharply the definite problems in a subject and follow them to the end, and who should find in the institute facilities for work. These men are not teachers; they aim not toward the higher development of the younger men, but regard them solely from the point of view of additional hands and eyes. They are ambitious, eager for reputation, inclined to insist on priority claims, and generally have a pretty high appreciation of their general excellence and the quality of their work. There are also men of wide culture, equally qualified for research, who are also great teachers and who teach through research. They have broader sympathies, the entire atmosphere about them is different, and even greater than their contributions to knowledge is the influence which they exert on their students. These men belong in the universities; they will find there the more congenial atmosphere, and when these rare individuals appear the university must even at the sacrifice of other things secure them and make their path easy. Teaching may also favorably affect research. A man who has made important contributions to knowledge as the head of a department in which the teaching is of the highest character told me that he finds in the review of the entire subject which the yearly course demands ever a new stimulus and fresh suggestions for the problems on which he is working.

There is another condition which one dislikes to mention and which is undoubtedly operative in the selection of teachers in a university. The university, recognizing that the salaries which it can afford to pay are not sufficient to render the recipients contented in the social environment which the position gives, rather seeks men who possess private means. That is, other things being equal, the man with private means will secure the position. It is true that the salaries given are sufficient for simple living and for family life, provided this is not too greatly extended; true also that food can be carefully selected and restricted to nutritive amounts and that the women of the household will be much happier in household employment than in social diversions, that public schools are very much better than private schools for the children, and, if so placed, that a pension is available after retirement, and the teacher need not in his life fear starvation It is, however, equally true that he cannot make these obvious truths recognized and accepted by the family Discontent, unhappiness with impairment of usefulness and loss of ideals too often result

It would be infinitely better if universities could be placed in a wilderness and withdrawn from the environment of idleness and wealth Simple tennis courts and even golf courses could be created, provided the ideals of the games were not perverted by the courts and links which wealth provides The women would undoubtedly find great diversion in the study of each other and in simple occupations Not only this, but since the university gives to society much more than it receives, outsiders would probably pay a good deal for temporary admission into the Utopia, and thus might be made to contribute to the funds of the university Such conditions are partly fulfilled in one of the great universities of Amercia, but I was not able to find that the social atmosphere differed a great deal, and that the air was always calm The trouble seemed to be that there were a few servants available and friction was excited by these being stolen from the temporarily happy possessors

What is the end sought in medical training? It is easy to say that it shall fit men to be of service in all the relations of man to disease This concerns the prevention of disease, the medical and surgical care, the social factors involved, and the human relations of the diseased individual It is impossible that all these can be fully united in the same individual, but they are all based upon knowledge and this can be attained only through the methods of science It is obvious that for this medical service a great many different kinds of medical men will be required and it remains a question how early their differentiation should begin Men will be needed in the public service to prevent disease and to take care of the sick This public service has only begun, but is sure, with the establishment of sickness insurance and other forms of social legislation in which sickness is a factor, to become prominent It will require men well trained both in the measures of preventive medicine and in the medical care of the sick At the present time the sick are most uneconomically cared for, a large part of the sickness could be prevented and the care of the sick is to a great extent inefficient and far too costly With economic conditions as they are, and there is little prospect of change, the earnings of 80 per cent of the families in the country do not suffice for much to be devoted toward recompensing medical services In the cities this condition is met by free medical service in the hospitals and by the charity of physicians

In the country districts, and it is here that the social medical service is most needed, it is not provided for at all save in certain sections Factories, mines, railroads and other large employers of labor, find it to their advantage to provide an organized medical service Ultimately the state must in some way provide a proper medical service in country communities for those who are not able to pay The schools must provide men suitable for such positions, they should be well trained in preventive medicine and capable of teaching the people the principles of right living Such physicians should be able to meet successfully medical and the simpler forms of surgical disease and to see that patients with the more serious and complicated diseases are sent to hospitals established at centers, the number of such centers depending on the relation of population to area

There must be provided capable surgeons This demands a long course of training, extending over years, in a well-ordered surgical clinic The exercise of the surgical art to obtain the best results in the more serious operations demands well-skilled assistants and attendants The operations demanded are comparatively few and such surgical clinics may be established at the hospital centers Highly trained medical men, internists, must be provided, men who are specially skilled in the cure of the diseases of children, obstetricians and specialists, and, finally, men whose work will lie exclusively in the care of the 20 per cent for whom illness is often a sad pleasure, men who understand inherited constitutions, fat reduction, and the mysteries of high finance[3] Above all, teachers must be provided

Can all this be accomplished by a medical school? Yes, provided the age period of entrance be shortened and the premedical education be better adapted to the medical needs All medical measures are based upon knowledge obtained by our senses, assisted by methods and instruments which extend their power There are many facts which can be acquired as such, but disease always presents problems to be solved It depends on so many factors which are often ill understood, which are variable in themselves and in the effect which they produce on the individual Disease, as the physician sees it, affects not classes, but individuals, and the individual case is always a problem The mere matter of diagnosis, as far as naming the pathologic process and ascertaining its situation, is to be regarded as comparatively easy, although every pathologist is aware of the number and the importance of the mistakes which are made In disease certain conditions which bring about functional disturbance are produced and life goes on under conditions which differ from the normal One of the distinguishing criteria of living matter is its variability, of which individuality is the expression, and the result of the abnormal environment of disease must differ in every individual The condition of the diseased individual, on which rational procedures of relief are based, cannot be ascertained from previous experience or from the experience of others or from generalizations, but must be deduced from the investigation of the individual There is no other road to the knowledge which gives power

Medical education must provide that the main facts of the structure and function of the body shall be firmly acquired, and also constant exercise in the study of disease and practice in methods One of the most important elements should be the recognition of knowledge and its separation from conjecture This last, of course, is making pretty large demands on the system, but something might be done at it The essential of the education in the medical school is the laboratory, a place which affords facilities for the study of things and phenomena, and in which the student can be trained in the use of his senses and in the use of instruments by which the power of the senses is increased In all the departments, in the clinics, in the hospital wards, the method is the same In the early or preclinical studies the laboratory method is of the utmost importance, for it is there that the foundation must be formed It necessitates teachers who can stimulate and extend to the students the enthusiasm in the pursuit of knowledge which they possess With the students as we receive them a large number of teachers, at least one to twenty, are required, for the students are not sufficiently developed to work independently The situation is unfortunate, moreover, in that the more help is given the students the more they require Their previous education in some mysterious way, but effectively, has robbed them of the capacity of self-dependence The unit system devised by Minot, in which the laboratory is divided into units, each consisting of a group of students under one instructor, would be admirable provided a sufficient number of capable instructors could be obtained The absence of subdivisions enables the better teachers to be more fully used Nor can the laboratory be a place for teaching alone, it must have an atmosphere, and knowledge must be sought within its walls by both teacher and student

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[3] Lest too many should be attracted into this class of physicians it must be remembered that there are obvious disadvantages associated with the practice The life is a dull one tending to intellectual decline, and the competition with Christian Science and various forms of medical cults is keen A new element seems at present to have entered into the competition in Boston A Chinese herb doctor endowed with preternatural skill in feeling the pulse and diagnosing conditions thereby who prescribes vegetable substances by the bag is acquiring to himself the most lucrative practice in the Back Bay It has not proved possible to remove this competition by legislative enactment and with the opening of the door of China to let in the West more of the Chinese doctors may escape to bring into this country competition with Chinese medicine I mention this as a danger which has not been foreseen by those who are seeking to introduce western medicine into China

The lecture is an important part of teaching, provided its function is understood It should not be used as a substitute for objective study, but to expand and coordinate the knowledge which the student has already acquired It must also interest and stimulate The lecturer must have a present and vital interest in the matter considered, and this demands a continual renewal Once, early in my career, I wrote out with great care a series of lectures, and said at the end "There, that job is finished, I can read these lectures with some slight additions year after year" I read them once, then again, and had I been obliged to read them a third time I should have sought another occupation Curiously enough, I heard of them long afterwards At a certain function I met a prematurely old man whose hard struggle with the world had left marks upon him, who told me how much as a student he had enjoyed those early lectures, that he had obtained a shorthand copy of them, and had made them the basis of his practice In another way I became aware that copies were in existence I was testifying in a medicolegal case, sharing in the plunder which the law extracts from the community, when the astute counsel from the other side — and the law compels a witness to be on one side or the other — interrupted with the remark, "but you said otherwise," and he proceeded to read to judge and jury extracts from a well-used and rather dirty book which he said I had written It was the lectures again, and I was obliged to give the court a dissertation on the subject of lectures, and included a charge for this in the fee which the soulless corporation afterward paid

One gains an interesting experience from lecturing However good may be the descriptive power of the lecturer, however able he may be in interesting his audience, it is useless to attempt to give in a lecture information on a complex subject For instance, I doubt if it would be possible for a lecturer, taking a group of men of the average intelligence, but coming from a world in which there were no trees, to enable them in an hour to form such a conception of an oak or elm that they could go out from the lecture and instantly recognize such a tree I have arrived at this view from personal experience which may not be complimentary, I have endeavored to ascertain from students before whom I had lectured on a topic in which I was certainly interested, and they seemed to be, how much correct information they had acquired, and have found it surprisingly small in amount

The lecture should also convey a stimulus to the student, and the lecture hour should form an agreeable interruption of the laboratory work Unless the student can gain in the lecture mental recreation and stimulation, the lecture had better be left out, although it may have aspects which are not usually regarded as among its assets One is its power of inducing gentle, refreshing, noiseless sleep in the audience, and the other is the educational value of the lecture to the lecturer To one who is a poor sleeper there comes a great satisfaction to see sleep descend upon an audience The lecturer experiences an exhilaration at the demonstration of the possession of a power which makes him akin to the God "who giveth his beloved sleep" I always insist that the sleep shall be noiseless, and position makes lecture room sleep usually of this character The lecture has its value to the teacher also How often the crudity of an idea becomes strongly apparent when the attempt is made in the lecture to convey the idea to others How often have I seen a culdesac open before me, with walls so high that they could not be carried even by a flight of eloquence, and into which I was on the verge of a headlong plunge! How eagerly is a friendly alley utilized as a means of escape! The teacher should find in the lecture a means of clarifying his knowledge, and in the stimulus of lecturing, very often new and useful points of view present themselves

Next to the lecture, in ascending value, comes the demonstration, also a method of value, but of overrated value It is possible to gather a few men, not more than ten, around certain objects, point out the essential things, and enable them to see them as does the demonstrator Such a demonstration can also be made the basis of an informal talk, and questions can be asked, but at the best it is little more than a projection of the ideas of the demonstrator

Oral recitation — I greatly dislike the word quiz — by the class is also a valuable exercise provided it can be given in such a way as to bring out the conceptions which the student has formed and to correct those which are faulty It is too apt to degenerate into a lecture or into a dry matter of question and answer The student must also be shown how to use books properly and be referred to original sources of information

The absence of teachers might be helped out by the aid of student instructors, for teaching is a most valuable discipline for the student The limit of time, the pressure of the work would necessitate the student giving an additional year to the course, and the low esteem in which the teacher is held would limit the choice to those in need of the small pecuniary recompense that could be offered

The education of the medical student so vaguely suggested should give a basis on which he can further develop the various forms of medical service

The profession of medicine is a career full of interest, the social position of medical men is on the whole good, there is a general feeling of fellowship and comaraderie among them, fostered by frequent meet ings in societies It is an eminently live profession, for knowledge is constantly growing and the opportunities for service are greater than in perhaps any other Service involves also the element of combat, for there is a constant struggle against ignorance All this attracts men to it On the other hand, it is at present very greatly overstocked, the income to be derived from its exercise is small and failure is easy No man can hope to succeed in it without industry, good mental endowment and without the possession of the quality of mind which recognizes, appreciates and seeks knowledge To all this might well be added that he must have interest in and sympathy with his fellow man

Harvard Medical School

THE RELATION OF GOUT TO NEPHRITIS

AS SHOWN BY THE URIC ACID OF THE BLOOD*

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Under the stimulus of the recently developed methods for quantitatively determining the uric acid of the blood, renewed interest has been shown in the diagnosis of gout, based on a retention of uric acid From the normal variations of from 2 to 3 mg per hundred c c of blood, the uric acid concentrations may be increased to as much as from 4 to 9 mg in gout Such increases are common occurrences in gout, but it does not follow, conversely, that these uric acid accumulations are infallible signs of gout That uric acid, as well as urea, may be retained in nephritis was pointed out many years ago by Garrod,[1] this observation being recently confirmed by more exact methods[2] It becomes essential, therefore, to eliminate the nephritic element as a factor in the retention of uric acid before the latter can be regarded as an indication of gout

BLOOD PICTURES IN GOUT AND EARLY INTERSTITIAL NEPHRITIS*

Date 1915-1916	Case	Age	Sex†	Diagnosis		Uric Acid Mg per 100 C c	Urea N, Mg per 100 C c	Creatinin, Mg per 100 C c	Phthalein 2 Hrs per Cent	Systolic Blood Pressure	Urine	
											Albumin	Casts
9/ 3	M K	49	♀	Typical gout		9.5	13	1.1	48	230	+	—
10/ 5	T B	57	♂			8.4	12	2.2	85	164	—	+
3/24	H L	51	♂			7.8	12	2.0	50	120	—	—
10/ 6	L J	43	♂			7.2	17	2.4		200	—	—
10/ 6	C P	45	♂			6.8	14	1.7				
3/31	B D	25	♀	Miscellaneous cases Showing some evidence of early interstitial nephritis	Slight edema	7.7	20	2.6	45	168	+	—
6/ 7	D S	56	♂		Hypertension	6.7	19	2.5	26	185	—	+
3/20	F V	14	♀		Endocarditis	6.3	12	3.6	32	120	++	+
3/28	H B	65	♂		Incipient nephritis	6.1	16	2.8	57	120	—	+
3/23	H J	50	♂		Diabetes	6.0	18	2.9	36	140	+	+
3/14	G C	40	♀		Incipient nephritis	5.[illegible]	15	2.1	46	147	—	+
3/22	M S	46	♀		Gastritis	5.0	12	2.5	52	190	+	+

* Normal findings Uric acid from 2 to 3 mg urea N from 12 to 15 mg creatinin from 1 to 2.5 mg
† In this column ♂ denotes male and ♀ female

Since gout, uncomplicated by nephritis, is characterized by an abnormally high uric acid concentration in the blood without any corresponding increase in the concentrations of other nitrogenous waste products, such as urea and creatinin, it would appear possible to eliminate the nephritic factor readily by obtaining normal values for the urea and creatinin of the blood However, we have accumulated considerable evidence indicating that in the development of interstitial nephritis, uric acid is the first to be retained, this being followed by retention of urea and, lastly, of creatinin[3] It is conceivable, therefore, that at an early stage in the progress of this type of nephritis, a blood examination would show retention of uric acid only, the concentrations of urea and creatinin being normal This, it will be recalled, is precisely the blood picture regarded as characteristic of gout

In the accompanying table are recorded two groups of cases, the first composed of five cases giving the typical classical histories of gout, and the second consisting of seven cases with some evidence of incipient nephritis, such as slight albuminuria, cylindruria or diminished phenolsulphonephthalein output These patients all subsisted on a purin-free diet several days before the examinations were made The first two cases of the first group, in addition to giving the typical histories of gout, also show one or more of these signs of nephritis, and from this point of view might be classed in the second group

The blood analysis in Group 1 may be regarded as typical for gout, and those in Group 2 are what might be anticipated in very early interstitial nephritis, if our views regarding the order of retention of nitrogenous substances in nephritis may be accepted The striking similarity in the blood pictures in the two groups is at once apparent

Very close scrutiny does, indeed, indicate a tendency for the urea and creatinin concentrations of Group 2 to rise above those of Group 1 The differences, however, are slight The uric acid figures for the first group average higher than those of the second group Nevertheless, many cases of gout have been reported[4] with blood uric acid concentrations as low as or lower than the lowest in Group 2

The data here presented raise the questions 1 Is gout merely a stage in the development of *interstitial* nephritis, whose further progress may be indefinitely delayed? 2 Is early interstitial nephritis merely potential gout, in which the clinical symptoms may or may not eventually appear? 3 Is the uric acid retention of gout due to the specific condition, *gout*, or to a complicating early interstitial nephritis?

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* From the Laboratory of Pathological Chemistry, New York Post Graduate Medical School and Hospital

* Read before the Section on Medicine, New York Academy of Medicine April 18 1916

[1] Garrod A B Observations on Certain Pathological Conditions of the Blood and Urine in Gout Rheumatism and Bright's Disease Med Chir Tr, 1848 xxxi 83 Von Jaksch R Beitrag zur Kenntnis der Uricacidaemie der Nephritiker Zentralbl f inn Med 1896 xvii 545 Von Noorden, C Metabolism and Practical Medicine 1907 iii 669

[2] Folin O and Denis W Jour Biol Chem 1913 xiv 29 ibid 1914 xvii 487

[3] Myers V C and Fine, M S, with the cooperation of Lough, W G The Significance of the Uric Acid Urea and Creatinin of the Blood in Nephritis Arch Int Med April 1916 p 570

[4] Folin O and Denis W Jour Biol Chem., 1913 xiv, 40 Arch Int Med, 1915, xvi 35

Daniels and McCrudden[5] have recently reported two cases of gout in women whose blood uric acid concentrations were quite normal Pratt[6] has reported several similar cases This would suggest the possibility that gout, unaccompanied by interstitial nephritis, may not necessarily be associated with high uric acid concentrations However, in spite of the large number of examinations that we have made, I never encountered a case such as those described by these workers

The two practical points brought out here are 1 Since uric acid is the first of the nitrogenous substances to be retained in interstitial nephritis, its determination may give the first indication of this condition when other signs are uncertain or lacking 2 Since gout and very early interstitial nephritis are characterized by essentially the same blood picture, it is necessary to employ every possible test to exclude nephritis before a high blood uric acid may be regarded as evidence of gout in the absence of the typical classical clinical manifestations

Second Avenue and Twentieth Street.

THE TREATMENT OF CHRONIC COLON BACILLUS PYELITIS BY PELVIC LAVAGE *

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AND

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It is not our object to discuss the various forms of treatment advocated for pyelitis, but to present the results obtained by pelvic lavage in this series of cases

It is well known that cases of acute colon pyelitis often clear up without medical treatment This often occurs in children Whether or not these patients may be considered as permanently cured is a question, many authors believing that pyelitis of adults, especially the pyelitis of pregnancy, is simply an exacerbation of a pyelitis of infancy, which has remained latent for years With the exception of such cases of pyelitis of pregnancy which were severe enough to warrant local treatment, pelvic lavage was not instituted in acute pyelitis

Nearly all the cases belong to the group usually designated as chronic pyelitis The question of whether pyelitis can exist without involvement of the renal parenchyma is one which always results in a good deal of discussion Undoubtedly, in a large percentage, the pyelitis is secondary to infection of the renal parenchyma this, no doubt, often clears up, so that the pelvis and ureter remain the seat of infection Instances in which this has occurred come to our notice usually without evidence of previous kidney involvement, and are grouped as cases of pyelitis

In selecting patients for treatment by pelvic lavage, it is well to bear in mind that many cases of pyelitis are associated with organic disease of the kidney, its pelvis or ureter, such as stone, stricture, dilatation and tuberculosis This group requires appropriate surgical treatment, and is not to be considered in this paper Roentgen examination, pyelography, and guinea-pig inoculations, when necessary, must be resorted to when there is doubt

When speaking of a cure, as a result of this mode of treatment, it is well for one to state just what is meant We have not discharged as cured any patient who did not fulfil two requirements First, the urine had to be free from pus, and second, cultures of the urine obtained by ureteral catheter had to be sterile To free the urine of pus was a relatively easier task to accomplish than it was to obtain sterile cultures We have repeatedly seen the urine free from pus and a disappearance of the clinical symptoms following one or two treatments, but the cultures still showed the presence of the causative organism It is evident that too much stress cannot be laid on this fact, and it is easy to understand why many of the cases relapse if the treatment is stopped before the cultures are sterile

As a rule, the growth of the colon bacillus was obtained readily on plain agar However, in these cases several kind of mediums were used, namely, blood agar slants, aerobes and anaerobes, plain agar and in some instances blood agar plates, and dextrose broth, in order to meet any cultural peculiarities which the organism might have In four cases we obtained growth on dextrose broth when the same specimen was sterile on all other mediums We do not believe this due to any peculiar adaptability of this certain colon bacillus to dextrose broth, but rather attribute it to the fact that several inoculations were made This conclusion was reached because the organism obtained in the broth grew readily when transferred to the mediums which had primarily given a negative culture

We emphasize, therefore, the importance of making several inoculations rather than a single inoculation of each specimen It has been our experience in this work that in rare instances the urine may contain pus and even motile bacteria, and still be repeatedly negative to culture, hence the value of staining the sediment for the presence of micro-organisms This difficulty has been encountered by other workers, and as yet has not been explained

Assuming that the colon bacilli present would grow in three days, the cultures were kept for this time, and not preserved longer for the development of slower growing bacteria When occasionally a stray colony of staphylococcus was found on a tube of culture medium, it was regarded as a contamination

In order to prevent recurrences, it is essential to relieve any focus which may be the cause of the relapse In women, for example, we had no difficulty in obtaining sterile kidney specimens long before the bladder urine became sterile It would seem, therefore, to be necessary to continue treating the bladder until it is free of the offending micro-organism Bauereisen and others have shown the direct lymphatic connection between the kidney and the bladder, via the lymphatics of the ureter, and it seems reasonable to assume that the failure to cure the bladder infection accounts for a part of the recurrences

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[5] Daniels, A L, and McCrudden, F H The Relation of Uric Acid to Gouty Attacks, Arch Int Med, June, 1915 p 1046

[6] Pratt, J H Am Jour Med Sc, 1916, cli, 92

* From the Dane Billings' Memorial Fellowship and the Presbyterian Hospital

* Read at the meeting of the Chicago Society for Internal Medicine, April 24, 1916

In male patients we were impressed with the great frequency with which we found signs of an associated prostatitis and seminal vesiculitis In one of our patients who had only one kidney, there were three distinct relapses due, we believe to failure on his part to carry out treatment for his prostatitis

As previously stated, this series deals only with chronic colon pyelitis, and most of the patients had resisted medical management Therefore, it is not our object to discuss the various drugs which have been employed in either local or internal treatment, but to state briefly the technic as it has been employed by us in treating this series of cases As a routine, a 1 per cent solution of silver nitrate was used In only one case did we use silver in stronger solution (2 per cent) It did not seem to make any difference in the rapidity in which a cure was obtained We cannot see any advantage in using a stronger solution, such as 5 per cent , recommended by Geraghty The amount of solution injected varied from 5 to 10 c c As an average, we employ between 5 and 7 c c It is of the utmost importance, when carrying out this treatment, that great care be taken to avoid a rapid filling of the pelvis and not to use too large amounts If the injections are carried out slowly and one avoids distention of the pelvis, there is practically no pain, except that incident to instrumentation In one of the cases the pelvis was irrigated with 30 c c of boric solution before the silver nitrate solution was injected This was carried out because there were large amounts of thick pus flowing out of the catheter and because of the presence of residual urine in the pelvis Small ureteral catheters were used, so as to allow the fluid to flow from the pelvis down the ureter, thereby preventing overdistention of the pelvis In some of the cases, catheters were passed into the pelvis, and, in others, only about half way The treatments were carried out once every five or six days, until the urine was sterile and free from pus

Autogenous vaccines were used in about half of the patients The internal treatment was carried out with three drugs, which were administered as follows During the first week, after the diagnosis was made, the patients were given 1 teaspoonful of sodium bicarbonate three times a day, so as thoroughly to alkalinize the urine During the second week, the soda was stopped, and in its place acid sodium phosphate was administered, so as thoroughly to acidify the urine During the second week, that is, the week of acid urine, hexamethylenamin was given, varying in amounts from 30 to 70 grains a day When the hexamethylenamin produced vesical symptoms, the amount was naturally reduced This form of internal treatment was continued during the alternate weeks, as long as the patient was under treatment The hexamethylenamin and sodium bicarbonate were not given simultaneously Our experience with other drugs has been too limited to permit of any definite statements relative to their merits

Pyelitis of pregnancy, when severe, is sometimes treated by emptying the uterus and, as a rule, the pyelitis clears up Whether or not the pyelitis is really cured is questionable With the institution of pelvic lavage in the treatment of pyelitis and its application in the treatment of the pyelitis of pregnancy, one is justified in stating that the pregnant woman should be given the benefit of this form of treatment before the pregnancy is interrupted Surgical attack of the kidney should also be considered only after a failure of pelvic lavage

In this series of cases, cystoscopy was performed on 115 patients, and the ureters catheterized for diagnosis and culture Of this number, thirty-eight proved to be chronic colon pyelitis Pelvic lavage was instituted in twenty-one cases In summarizing the results of treatment, however, we shall report on only fourteen patients, because we were able to follow this number to final results to ascertain whether or not they were bacteriologic cures The cases in which only a diagnosis was made and only one treatment was given are not considered in this report, irrespective of the disappearance of the subjective symptoms or the disappearance of pus from the urine Of the fourteen patients treated by lavage, bacteriologic cures were obtained in eleven cases In the remaining three, it was possible to obtain positive cultures from the ureters, although subjective symptoms and leukocytes in the urine had long since disappeared

The number of injections required varied In four cases, one injection was given, in five cases, two injections in three cases, three injections, in one case, four, and in another, eight injections

CONCLUSIONS

1 From our results in this series of cases, we believe that pelvic lavage gives a greater number of bacteriologic cures in a shorter space of time than any other form of treatment It is important that the urine be sterile, in order to prevent recurrences

2 In several instances, we obtained sterile urine after one or two treatments of patients who had been on internal treatment for many months

3 If patients fail to respond to this form of treatment, we may be dealing with a condition other than a simple pyelitis, for example, tuberculosis, stone, or stricture of the ureter

122 South Michigan Avenue

Sectionalism.—During all medical history there has never been a time when the difficulties of the profession were greater than they are today, when it was more imperative that it should stand with an undivided front. We are in a transition period of unprecedented gravity The social order of things is being changed The system of workman's compensation is but one manifestation of the social revolution that is quietly but resistlessly going on These changes are rooted in a profound sociologic movement of world-wide extent In the British Empire and on the Continent they are farther advanced than they are with us They cannot be stayed, but they may be directed, and it behooves the medical profession to be alive to the changes going on and ready as an undivided body to meet them Never has the need of unity been greater If the profession shuts its eyes to these conditions and relapses into a state of guerrilla warfare within itself it will suffer irreparable harm It is time that it woke up and came to itself and ceased bickering over nonessentials This social revolution is profound in its nature and goes to the very foundation of organized modern society The medical profession while gravely affected by it, is but a factor in its causation This cannot be too strongly impressed on medical men We are in the grasp of powers wholly outside of our profession powers that run as deep as society itself Our present state of disquietude is not due to one or to a few superficial causes alone Organizations which seek to remedy our ills by gross commercialism, by vituperation and indiscriminate attacks on everything and everybody, are foredoomed to failure Their outlook is narrow erroneous and futile—*New York State Jour of Med*, February, 1916

INTRACRANIAL TREATMENT OF SYPHILITIC AND PARASYPHILITIC OPTIC NERVE AFFECTIONS

PHYSIOLOGIC EVIDENCES RESEARCHES ON INTRAVITAL STAINING OF THE OPTIC NERVE *

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I INTRODUCTION

This paper is a report of experimental work pursued with the intention of finding a more efficient method of reaching the optic paths by curative agents, and ventures to suggest another way of treating optic nerve affections of syphilitic nature, which do not respond to the classical antisyphilitic treatment

During an experimental study of a certain phase of ocular anaphylaxis, I learned that I could not produce an anaphylactic condition of the optic nerves in dogs by repeatedly injecting a foreign serum into the spinal canal, a supposedly good route of reaching various parts of the central nervous system My failure prompted me to ask the following questions

1 Does the foreign serum introduced into the spinal canal ever reach the optic nerve?

2 If the serum does not reach the optic nerve, does the medication, introduced intraspinally for intracranial conditions like general paresis, primary optic atrophy, etc, reach the cortex of the brain or the optic nerves?

3 If the foreign serum and medication introduced into the spinal cavity do not reach the optic nerves, what would be a good way of bringing into contact these substances with the visual paths?

The answer to the last two questions, a by-product of my study on anaphylaxis, constitutes the central idea of this paper It is superfluous to dwell at length on the importance of this problem The so-called primary optic atrophy is to the ophthalmologist what general paresis is to the neurologist, one of the saddest conditions to be contended with It is by no means a rare affection According to Uhthoff,[1] 9 per cent of tabetics and 8 per cent of paretics get optic atrophy, and 2 per cent of paretics get optic neuritis From 10 to 20 per cent of all postmortems in tabetics show changes along the optic paths Fifty per cent of patients with cerebral syphilis have an involvement of the optic nerves, chiasm or tracts Thirty-seven per cent of all optic atrophies are in tabetics, and from 60 to 100 per cent of tabetic optic atrophies are syphilitic Our latest textbooks on ophthalmology are very reticent regarding the success in the treatment of primary optic atrophy Everywhere, in books as well as in our own experience, we gather that failures amount to almost 100 per cent Why? Is there really no way of reaching and treating such optic nerves?

The therapeutic problem is as difficult as it is important There is no doubt that tabetic and paretic optic atrophies are of syphilitic nature Why, then, do these conditions not respond to antisyphilitic treatment?

Anatomically, the optic nerves are very similar to the brain In both we find a parenchymatous tissue with two systems of irrigation serving the double purpose of nutrition and drainage blood vessels and spaces for the circulation of cerebrospinal fluid

Pathologically, the optic paths as well as the rest of the central nervous system react to the syphilitic virus in almost identical manner The changes appear mainly either in the interstitial tissue, blood vessels and meninges, or they are localized mainly in the parenchyma, ganglia cells of the cortex or of the retina and in the nerve fibers of the central nervous system or of the optic nerves We deal with an interstitial or with a parenchymatous syphilis

Therapeutically, we find the same striking similarity between the optic paths and the rest of the central nervous system In both, the interstitial syphilis does respond, and the parenchymatous syphilis (paresis and primary optic atrophy) does not respond to antisyphilitic treatment

Bacteriologically, there is no difference between tabes, general paresis and the cerebrospinal syphilis Spirochetes have been found in the central nervous system, cerebrospinal fluid and blood of tabetics and paretics, and have been cultivated, thus proving their viability and virulence There can be no doubt that spirochetes, and not "toxins" alone, are the causative factor of syphilitic "primary" optic atrophies The fact that the micro-organisms have not as yet been demonstrated in the tissue of the atrophied optic nerves is just as little evidence against their existence there as was the fact that no spirochetes were demonstrable in the brain of paretics before the days of Moore, Noguchi and Levaditi, an evidence that they were absent in such brains

The ideas from which we have to start in handling the problem of treatment of the so-called metasyphilitic, primary optic atrophies (in tabes, general paresis and some cases of cerebrospinal syphilis) would be about as follows

1 The condition is due to spirochetes

2 The syphilitic optic nerve affections are to be considered and treated in the same light and by the same methods as are the syphilitic manifestations of the rest of the central nervous system

3 The general antisyphilitic treatment as administered before the era of intraspinal medication failed in a large percentage of cases, and always failed in parasyphilis of the nervous system and of the optic nerves

4 The intraspinal method proved the efficacy of direct, local application of drugs on syphilis of the spinal cord

5 What could we do in order to apply the antisyphilitic medication directly on the spirochetic affections of the optic nerves?

In order properly to grasp the last sentence, the main subject of this paper, it is necessary that the anatomic, physiologic and pathologic facts in connection with our problem shall be briefly stated I shall, then, relate the experimental attempts and finally discuss the therapeutic suggestions to be drawn

II THE VENTRICULAR-SUBARACHNOID-PERINEURONAL SPACES OF THE CENTRAL NERVOUS SYSTEM AND OF THE OPTIC NERVES

Of the three meningeal sheets enveloping the central nervous system and the optic nerves, the arachnoid concerns us most It is described (Cunningham[2]) as a thin, transparent membrane, which envelops both the

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* Read before the Section on Ophthalmology at the Sixty Seventh Annual Session of the American Medical Association, Detroit, June, 1916

* Because of lack of space, this article is abbreviated in THE JOURNAL The complete article appears in the Transactions of the Section and in the author's reprints A copy of the latter will be sent by the author on receipt of a stamped envelope

[1] Uhthoff Handbuch der gesamten Augenheilkunde (Graefe Saemisch) Kap XXII, Part 2, and Vol xi, Part 2, B

brain and the cord between the dura and the pia mater The cranial part of the arachnoid bridges over the inequities on the surface of the brain, and does not dip into the various fissures and sulci of the brain as the pia mater does The spinal subarachnoid space is wide and partially subdivided into compartments by three incomplete longitudinally arranged septa It is continuous with that of the cranial cavity and with the ventricles of the brain

Summary The outer and the inner (ventricular) surface of the brain and of the spinal cord, the outer surface of the optic nerves, the perivascular spaces penetrating into the brain tissue and into the septa between the optic nerve bundles, and probably the spaces between the cells and possibly those between the nerve fibers (perineuronic spaces) form a system of spaces and channels which we may call the ventricular-subarachnoid-perineuronic system This system is full of cerebrospinal fluid which serves to nourish the nervous parenchyma, and drains off its products of metabolism

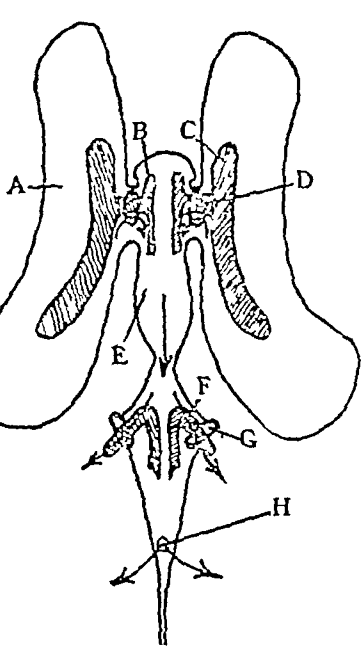
It is into this fluid that we have to introduce our medication if we intend to reach the nervous tissue itself

III THE CEREBROSPINAL FLUID

Function — The cerebrospinal fluid is the medium of exchange between the blood in the capillaries and the neurons of the central nervous system

It equalizes the pressure throughout the whole craniospinal cavity, acts as a water cushion, especially at the base of the brain, protecting the vital structures of the medulla from concussions, and maintains uniform equalization of the blood supply elements during the rhythmic variations of respiration and circulation (Mott[4]) It is the medium of conservation of the cellular excitability

Distribution —Mott[4] has demonstrated the existence of a system of canaliculi surrounding the neurons and the capillaries of the brain which is in direct communication with the subarachnoid space Wegefarth[7] has obtained similar results from his study of the retinal neurons, these perineuronic spaces communicate with the optic nerves The cerebrospinal fluid is distributed in the large spaces (ventricles and subarachnoid) as well as in the perineuronic spaces all over the central nervous system



Schema showing general disposition of the ventricles in the brain and the choroid plexuses circulation of the cerebrospinal fluid in the ventricles (after Mestrezat) *A* lateral ventricle *B* plexuses of third ventricle *C* plexuses of the lateral ventricles *D* foramen of Monro (between lateral and third ventricles) *E* third ventricle *F* plexus of fourth ventricle *G* foramen of Luschka and *H* foramen of Magendie (points of communication between fourth ventricle and subarachnoid space) Arrows show the direction of flow of the cerebrospinal fluid in the ventricles.

The cerebrospinal fluid has a double origin the choroid plexuses and the perineuronic spaces It is very rapidly reformed after a lumbar or ventricular puncture This demonstrates the active secretion of the cerebrospinal fluid

Circulation —The cerebrospinal fluid is not stagnant The reasons in favor of the idea that this fluid is in continuous motion are very plausible Fluids are not compressible. Consequently, during each systole and expiration, when a larger amount of blood is in the cerebrospinal canal the cerebrospinal fluid has to be temporarily and rhythmically displaced

Since we accept that the main sources of the production of the cerebrospinal fluid are the choroid plexuses and the perineuronic spaces, we have to admit that the directions of flow will be, on the one hand from the lateral ventricles into the third, then into the fourth and from there into the subarachnoid spaces enveloping the brain, cerebellum and spinal cord, and, on the other hand, from the perineuronal spaces along the perivascular sheaths into the subarachnoid spaces

In spite of these anatomic reasons, Mott, based on Golla's beautiful experiments, believes that there is a current of cerebrospinal fluid, starting from the subarachnoid spaces toward the perineuronic canaliculi We shall see later, in discussing therapeutic considerations, the immense importance of such a conception

Drainage or Resorption —The cerebrospinal fluid, being continuously secreted, has to be steadily drained off

Which are the paths of resorption of this fluid? Most of the physiologists, American and English, admit that the main avenue is the venous system of the craniospinal cavity, and the accessory avenues are the lymphatics along the craniospinal nerves But voices of dissension are raised by no less an authority than Goldmann,[11] who believes that the lymphatics play the principal role of resorption, and Mott,[4] who suggests that the fluid is drained off mainly into the cerebral capillaries

Cushing,[9] Weed,[8] Frazier and Peet,[12] Dandy and Blackfan,[13] Reiner and Schnitzler have conducted such conclusive experiments that there could be no doubt that the larger part of the cerebrospinal fluid drains off into the sinuses and venous plexuses of the cerebrospinal cavity, and that a very slow process of filtering takes place along the lymphatic system of the cranial and spinal nerves The practical significance and application of this physiologic fact will be discussed in the consideration of therapeutics

Permeability —The choroid plexus is a very efficient barrier against the permeation of substances introduced into the blood Chlorids, bromids, iodids, nitrates, ferrocyanids, salicylates, acetates, methylene blue, fluorescin, biliary pigments, mercury and arsenic, do not penetrate normally into the cerebrospinal fluid (Mestrezat,[6] Sicard[14]) Volatile substances like ether, chloroform and curiously enough hexamethylenamin, pass into the cerebrospinal fluid The choroid plexus and its lining seems to have a selective power and does not give passage to the antisyphilitic drugs into the cerebiospinal fluid (Ballance[15])

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[7] Wegefarth Jour Med Research 1914 191 xxxi,

[11] Goldmann E E Vitalfärbung am Central Nerven System Berlin 1913

[12] Frazier C H and Peet M M Factors of Influence in the Origin and Circulation of the Cerebrospinal Fluid Am. Jour Physiol 1914 xxxv 268

[13] Dandy W E and Blackfan K D An Experimental and Clinical Study of Internal Hydrocephalus The Journal A M A. Dec 20 1913 p 2216

[14] Sicard These de Paris 1890

In typhoid, the agglutinins found in all the humors of the body are not present in the cerebrospinal fluid Toxins, hemolytic amboceptors, are also absent from the fluid, while they may be found in large amount in the blood

Staining substances like methylene or trypan blue when injected into the blood do not pass into the cerebrospinal fluid This power of retention by the choroid plexuses of substances injected into the blood stream is another very important point to be considered in our further discussion of the subject on therapeutics

IV EXPERIMENTS ON INTRAVITAL STAINING OF THE OPTIC NERVE

This part of my paper is concerned only with the relatively simple problem of solving by the intravital staining method, first, whether the spinal injections are an effective procedure of reaching the optic nerve and, second, which is the best method of staining the optic nerves intravitally

AUTHOR'S EXPERIMENTS

A Does the optic nerve stain when trypan blue, methylene or a suspension of very fine particles of coal is injected into the blood, spinal canal, cranial subdural cavity or lateral ventricles?

B Which is the best route and method for vital staining of the optic nerves?

One cat, two rabbits, and twenty-five dogs were used Injections were made into the veins, spinal subarachnoid, cranial subdural space and lateral ventricles In two animals, methylene blue aqueous solution was the substance injected, in the rest, trypan blue (1 per cent) in normal salt solution or in ox serum

For spinal injection, a long spinal needle was introduced into the lumbar region, after cerebrospinal fluid ceased dripping, a variable amount of staining fluid was very slowly injected

For cranial subdural injection, the skull was trephined about 1 cm to the right side of the median line, over the parietal bone The needle was carefully introduced under the dura and the fluid injected

For injection into the lateral ventricles, the needle was introduced perpendicularly through the trephine opening into the ventricles, after cerebral fluid ceased dripping, staining solution was very slowly injected

The animals were killed by chloroform or ether, postmortem examination immediately after the injections, or several hours, days or weeks later

Group 1—Two dogs were given an intravenous injection of 50 c c of methylene blue solution, 2 per cent The postmortem performed right after the injection revealed no trace of stain in the cerebrospinal system

Group 2—Two rabbits and one cat were treated by a cranial subdural injection of trypan blue solution One rabbit killed immediately after the injection exhibited a staining of the meninges of the entire cerebrospinal system The other rabbit, killed three days, and the cat two days after the injection showed no staining of the meninges (only a blue mark on the dura of the cat in the vicinity of the injection) What became of the stain? This is an interesting problem to be investigated further

Group 3—Twelve dogs received intraspinal injections of a 1, rarely a 5 per cent solution of trypan blue or lampblack suspension The amount varied between 2 and 32 c c The postmortem was performed from ten minutes to twelve days after the injection In eleven animals the meninges of the spinal cord, and on some of the cerebellum and of the medulla oblongata were more or less stained The optic nerves were not stained

Group 4—Seven dogs received injections of trypan blue solution, and one dog an injection of lampblack suspension into the lateral ventricles The amount of fluid ranged from 1 to 24 c c, and the postmortem examination was performed, on some, from fifteen to thirty-nine minutes, on others, two to three hours, and, in still others, five to seven days after the injections All the animals had the meninges of the entire brain and spinal cord and of optic nerves very intensely stained

Microscopic Findings—Specimens of chiasm, optic tracts, optic nerves and the posterior pole of the eyeballs of two dogs were examined microscopically

Dog 1 had received an intraventricular injection of trypan blue and was killed two hours and five minutes later

In the optic nerve section the microscopic specimens showed the pia deeply stained in diffuse fashion together with the more superficially placed septa between the nerve bundles Vessels lying in the outer third of the nerve showed considerable of the stain in the walls, the intima cells of these vessels were stained faintly blue The central two thirds of the nerve showed none of the dye anywhere The arachnoid stained a pale blue purple, rather diffusely, its blood vessels taking on a still paler tinge

In the chiasm section, the condition was substantially the same as in the optic nerve, except that the stain was everywhere less intense

No trace of stain was found in the retina or other parts of the eyeball

Dog 2 had been treated by an intraventricular injection of 1 c c of lampblack suspension, and was killed seven days later The microscopic specimens showed the optic nerve fibers free from pigment In the superficial layers on the pia there was a thin, irregular band of pigment There were some scattering pigment spots in the surrounding areolar tissue (arachnoid spaces), The pigment did not penetrate the optic nerve at all The blood vessels of the pia and arachnoid were free from pigment, there was no tendency to enter the perivascular sheaths A section of the chiasm revealed the pia almost completely free of pigment, in spots there were considerable numbers of large and small granules crowded together, but free, not included in any cell bodies The arachnoid was somewhat hypertrophied with dilated blood spaces containing many red blood cells and many scattered clumps of pigment

COMMENT ON MACROSCOPIC AND MICROSCOPIC FINDINGS

As we have seen, the intraspinal or intravenous injection of the stain did not reach the optic nerve In intravenous injection the staining substance is retained by the choroid plexuses and cannot enter the fluid in the ventricles, consequently it has no way of reaching the optic subarachnoid space In intraspinal injections, on the other hand, the anatomic and physiologic data discussed in the consideration of cerebrospinal fluid and treatment find in this research an experimental basis The fact is that, generally, the injection fluid does not go beyond the posterior cranial fossa Some investigators have found cranial nerves stained by intraspinal injections of pigment Others have obtained results similar to mine, a staining of the meninges of the spinal cord only, when the injections were made into the spinal canal The discrepancy between these findings may be explained by the different methods of injections used, by the larger or smaller amount of fluid injected, or by the higher or lower pressure used It is natural that large amounts of fluid and high pressure injections will drive the stain into the cranial cavity, but the procedure is entirely unphysiologic My experience with cranial subdural injections coincides with that of Ballance[15] and others who state that the fluid cannot be injected in any appreciable amount, and that in dogs the staining fluid does not reach the optic nerves Finally, the cranial intraventricular injections have without exception given the best results In all the experiments the post mortems showed the optic nerve sheaths intensely stained, and the microscopic findings illustrate very prettily that the course taken by the pigment was along the arachnoid and subarachnoid spaces down along the optic nerve

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[15] Ballance Brit Med Jour, 1914, p 596

Experiments 13 and 15 constitute a beautiful demonstration of this statement In Experiment 13, a large dog's skull was trephined under general anesthesia and 2 5 c c of trypan blue injected into the lateral ventricle Immediately following this, the right optic nerve was exposed by an extensive resection of the external wall of the orbit, and the nerve watched for the possible appearance of the stain One hour and thirty-two minutes later the optic nerve began to stain bluish

In Experiment 15 the optic nerve was exposed before the trephining Two hours and eight minutes after the intraventricular injection of trypan blue the optic nerve began to stain bluish At the postmortem the optic nerve which had been exposed intravitam was more intensely stained than the other optic nerve In these two experiments I have been able to see for myself how soon the fluid penetrated from the ventricles into the optic nerves The therapeutic application of these findings will be discussed in the consideration of treatment

V PATHOLOGY OF THE SO-CALLED METASYPHILITIC OPTIC NERVE AFFECTIONS

The universally accepted view of the pathology of tabetic and paretic optic atrophy is that it consists of a primary degeneration of the nerve fibers, beginning in the retina and extending centripetally to the optic nerve Uhthoff[1] regards as a settled truth the conception that the tabetic and paretic optic atrophies are an ascending process of primary degeneration starting in the retina Ginsberg, Greeff, Grosz, Virchow, Leber, Elschnig, von Leyden, Goldscheider and others are of the same opinion Uhthoff accepts the general view that there are two types of syphilitic optic atrophies ascending (tabetic and paretic) and descending (in cerebrospinal syphilis) In the latter type Uhthoff describes the postmortem changes ranging between basal meningitis, perineuritis, gummatous infiltration in and around the optic nerve, neuritis descendens and papillitis Sometimes we find syphilitic changes in the intracranial portion of the optic nerve without the extension of the process to the orbital portion At other times the gummatous infiltration is only in the trunk of the optic nerve without involvement of the sheaths Most common is a primary process of the sheaths with a secondary involvement of the optic nerve The chiasm is a point of predilection for gummatous infiltration In other words, the optic atrophy follows an inflammatory process somewhere in or around the optic nerve or chiasm In the other type, the taboparetic, the optic atrophy is primary in nature, there is no inflammatory process anywhere in the optic nerve, the ganglion cells of the retina degenerate, and the nerve fibers undergo the same process In one type the changes begin in the blood vessels and connective tissue of the meninges and septa of the nerve In the other type the changes are primarily in the parenchyma

About two years ago, Head[19] published his very illuminating classification of syphilitic and so-called metasyphilitic conditions of the central nervous system and brought order out of the chaotic conceptions of the pathology of tabes, paresis and cerebrospinal syphilis According to Head, the syphilitic changes are either mainly in the vascular interstitial tissue or mainly in the parenchymatous tissue (ganglion cells and fibers) of the central nervous system We consequently deal with an interstitial or a parenchymatous process The first constitutes so-called cerebrospinal syphilis, the second, tabes and general paresis Along this line of thought, syphilitic optic nerve affections may be classified in the same manner, interstitial and parenchymatous In one the process begins as a perineuritis and extends to the septa between the nerve bundles In the other the process is limited to the retinal ganglion cells and extends upward into the optic nerve fibers The first one, just as in cerebrospinal syphilis, is amenable to antisyphilitic treatment, the second one, the primary optic atrophy, like general paresis, does not respond to treatment The one is due to spirochetes, the other was supposed to be due to toxins (a plausible reason why paresis and primary optic atrophy do not react well to mercury and arsenic) But the "Wassermann positive" findings in the spinal fluid and the demonstration of spirochetes in the spinal cord of tabetics and in the cortex of paretics have changed our idea about the toxic origin of these conditions Neurologists have become accustomed to think of paresis and tabes as syphilitic manifestations in the parenchyma of the nervous system due to the direct action of a certain strain of spirochetes, still spirochetes just the same, not toxins

While neurology was undergoing such radical changes, ophthalmology adhered to its conservative view that primary optic atrophy (tabetic and paretic) is due to some "toxic" substance, possibly of syphilitic nature, and the main reasons for persisting in this unfortunate view, paralyzing any new therapeutic thoughts, were first the old teachings on the pathologic anatomy of the primary optic atrophy and, second, the inefficiency of the antisyphilitic treatment

Let us see whether this classical conception of ophthalmology is really unassailable If it could be proved that the primary optic atrophy is a syphilitic *manifestation* due to the direct action of spirochetes, just as tabes and general paresis, then our feeling of helplessness would be relieved and we would enter the same road of therapeutic optimism that neurologists did lately

A careful review of the literature on the microscopic examinations of atrophic nerves in tabetics and paretics reveals that our conception of tabetic atrophy as a primary degeneration of the retinal ganglion cells is based on the finding of twelve authors (Cruveilier, Virchow, Leber, Uhthoff, Popow, Moxter, Schlagenhaufer, Elschnig, Glicksman, von Grosz, Wilbrand and Saenger) in nineteen postmortems of tabes and three of general paresis On the other hand, Keraval and Raviart[20] in 1902 and Marie and Leri in 1904 have examined microscopically the atrophic nerves in five paretics and twenty-three tabetics and described an interstitial optic neuritis (Keraval and Raviart), a meningitis and endovasculitis, and perivasculitis, followed by interstitial optic neuritis, a thickening of the pia and arachnoid around the chiasm and optic nerves very similar to the meningitis of the spinal cord in tabes (Marie and Léri) These findings show that the so-called primary optic atrophy is due to a parenchymatous as well as an interstitial process and differs *entirely from that* described by the older authors Furthermore, none of them have applied the methods of Nissl and Alzheimer to the study of the optic nerve and retina in tabetic and paretic atrophy, and Greeff[21] justly remarks that it is curious how few reliable microscopic examinations of the tabetic optic nerves we possess This gap in our knowledge has been filled by the very able studies of Stargardt[22] This author has examined the optic nerves, retinas, chiasms, tracts, brains and spinal cords of sixteen tabetics and paretics with optic atrophy in various stages, and eight normal optic nerves from the same class of patients He calls attention to the fact that the descriptions of the retina given by previous authors are not reliable because they obtained their specimens too late, long after the cadaveric changes in the retina had set in Stargardt's retinas had been fixed by injections of Birch-Hirschfeld fluid in the vitreous as early as from twenty to thirty minutes after death Both for this reason and on account of the fact that he used the latest *method of staining, Stargardt's findings are to* be considered more reliable and more in accordance with the actual pathologic conditions

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[19] Head H. Brain 1914

[20] Keraval and Raviart Arch de Neurol 1902 xii, 356

Stargardt concludes from his studies that the tabetic as well as the paretic optic atrophy begins in the optic nerve and not in the retina He saw specimens of optic nerves from tabetics with beginning atrophy without any changes in the retina, and other specimens of optic nerves completely atrophic but with many normal ganglion cells in the retina He argues that if *the retina degenerated first, the opposite condition* ought to be found

The examination of the atrophic nerves revealed that 1 Nowhere were there degenerated nerve fibers to be found without a focus of exudation preceding the degeneration 2 The most common seat of the exudative process is in the intracranial portion of the optic nerves 3 In general paralysis the exudate appears in the brain and extends to the optic paths, in tabes, it appears independently in the optic paths and spinal cord Everywhere the exudative process precedes the degenerative one Stargardt is very emphatic in his belief that the tabetic and taboparetic optic atrophy is not the action of a "toxin," and his reasons seem very plausible

First, the process appears as an exudate, irregularly in various parts of the nerve, a fact which is in direct contradiction with all we know about the action of toxic substances (wood alcohol, quinin, filix mas (male fern), tobacco, etc), which always act in the same manner and on the same group of elements of the visual organ (maculopapillar bundle, retinal blood vessels, etc) Second, of all the toxic substances we know as acting on the visual organs, none produces exudative foci similar to those described in *taboparetic* optic atrophies Such foci can be produced only by micro-organisms (spirochetes) Although the presence of these micro-organisms has never been demonstrated in the optic nerves of tabetics and paretics, their probable existence in these tissues may be inferred from Noguchi, Moore and Levaditi's demonstration of the spirochetes in the cortex of such patients, and from the similarity of changes found in the optic nerves, and brain and spinal cords of these patients

If Stargardt's work is confirmed by future investigations, we shall have to modify our ideas *regarding* the pathology and pathogeny of the so-called primary optic atrophies These atrophies will cease to be called "primary" because they are secondary to an inflammatory focus somewhere along the optic nerve They are not toxic in origin, most probably they are due to the direct action of the spirochetes These micro-organisms are carried to the optic nerves along the cerebrospinal fluid, blood stream and by contiguity along the meninges They reach first the sheaths and the septa of the optic nerve wherever there are blood vessels and cerebrospinal fluid Later on they penetrate the neuroglial envelopes of the nerve bundles and safely lodge themselves where neither blood nor medication can reach them, at which stage of the game we become entirely powerless

The importance of this conception cannot be overestimated, its influence on the therapeutics of syphilitic and parasyphilitic optic atrophies cannot be denied It is only a matter of time to work out the two main questions early diagnosis, while the spirochetes have *not as yet entered the interior of the nerve bundles,* and the effective treatment

VI TREATMENT OF TABETIC AND PARETIC OPTIC NERVE AFFECTIONS A SUGGESTION

In 1902 at the Medical Congress of Cairo, Bouchard made the significant statement that in both local and general diseases which are localized, if a general drug treatment exercises a specific cure, one might as well confine the administration of the remedy exclusively to the diseased tissue and attempt the cure by injecting the medication into the affected part

In case of acute articular rheumatism, a man weighing 135 pounds, who takes every day by mouth 90 grains of sodium salicylate, sees all his joints clearing up Every day a grain of the drug has entered into every pound and a half of his body and, of course, a very small proportion of this has found its way into the soft parts surrounding the affected joints Bouchard claims to have cleared up acute articular rheumatism by articular injections of extremely small quanti*ties of sodium salicylate*

In syphilis the instances in which local treatment, besides the general treatment, is absolutely necessary to effect a cure are numerous Bouchard recites several such cases

A man with an ulcerating gumma of the back had been treated by mercury and iodids without any visible results A few injections of a potassium iodid solution around the gumma healed the ulcer in a very short time

A woman with deeply ulcerated condylomas distributed over various parts of the body did not get relief by a prolonged general antisyphilitic treatment Injections of potassium iodid and mercury biniodid were begun, and the ulcer under the treatment disappeared in three days Another ulcer disappeared promptly after six injections The condylomas which were not treated did not undergo *any change*

Local application of the specific drug, says Bouchard, brings it in direct contact with the affected *tissue* and acts without being diffused throughout the *entire* organism, where it may cause *symptoms of* intoxication

Bouchard's ideas regarding the topical treatment of certain localized diseases have found their *justification* in our present experience with the intraspinal treatment of cerebrospinal syphilis

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[21] Greeff Pathologische Anatomie des Auges

[22] Stargardt Arch f Psychiat, 1[illegible]1

Local Therapeutic Application in Certain Conditions of the Nervous System—In patients with purulent meningitis, Flexner[23] has demonstrated the necessity of bringing the therapeutic serum directly into contact with the meninges by spinal subarachnoid injections

Swift and Ellis[24] have cleared up syphilitic changes of the cerebrospinal fluid (pleocytosis, excess of globulin and positive Wassermann) by intraspinal injections of salvarsanized serum in patients in whom general treatment had completely failed

Sicard[14] and others have shown how next to impossible it is to have the choroid plexuses transgressed by drugs introduced into the organism by mouth, skin general circulation, etc It has been found that at the appearance of the first symptoms of experimental tetanus, subcutaneous injections of antitoxins have no influence on the progress of the disease, while the local application of the antitoxin right to the central nervous system has a most beneficial effect on the tetanic manifestations

Horsley[25] challenges any neurologist who can affirm that a gumma of the cerebrospinal system has ever been cured by a general treatment with mercury after the classical method

Gowers long ago insisted on the fact that cerebral syphilis does not respond fully to the classical antisyphilitic treatment, and that after some subsidence it shows recurrences Horsley agrees with Gowers that in many cases of gumma, pachymeningitis and syphilitic optic neuritis we do not obtain good results by the classical mercury and iodid treatment

We see on the one hand, therefore, clinicians of the caliber of Horsley and Gowers declaring the ineffectiveness of the old way of treating certain conditions of cerebrospinal syphilis, and on the other hand authorities like Sicard, Flexner, Swift and Ellis and their large following asserting the marked effectiveness of the application of the medication right on the cerebrospinal system

Best Method of Reaching the Central Nervous System With Our Medication—In a previous chapter it has been shown by experimentation that the cerebrospinal fluid, which is the ambiant medium of the neurons of the central nervous system, cannot be reached by any other than the subarachnoid route It follows that, since we admit that certain conditions of the central nervous system do not benefit by the administration of drugs by mouth, skin, blood, etc, we have to try the direct introduction of the curative agent into the cerebrospinal fluid Through this medium the agent has more of a chance to reach the affected central neurons Swift and Ellis have been perfectly logical in their intraspinal treatment of syphilis of the central nervous system

Failure of Intraspinal Medication for the Treatment of Intracranial Syphilis—Expectations, however have only partially been realized While various syphilitic conditions in the spinal cord and tabes have sometimes improved marvelously under the influence of intraspinal injections, intracranial conditions and mostly optic nerve affections of syphilitic nature did not respond to this treatment

Noguchi and Moore's discovery of spirochetes in the brains of paretics has given a strong impetus to the intraspinal application of antisyphilitic drugs for general paresis, but the hope of those who tried this method of treatment has been completely disappointed In the United States, Cutting and Mack, Markland, Beling, Wardner,[26] Mapother and Beaton, and in Europe, Wechselmann, Kleist, Marinesco,[27] Marie, Levaditi and Sicard [28] have treated a number of paretics by intraspinal injections, and the invariable result was failure This failure had to be explained

Why does salvarsanized serum act well in a fair percentage of spinal syphilis and fail to give any satisfaction in an intracranial syphilitic condition, like general paresis?

The answer may be simple The salvarsan introduced into the spinal canal does not reach the cranial contents (brain and optic nerves) Disappointing as this may sound to us, it is a fact sustained by both clinical and physiologic experience

We have seen that small quantities of soluble and insoluble substances injected into the spinal cavity do not reach the brain or optic nerve The pigment is anchored by the tissues in the immediate vicinity of the injected area and stains it What is left diffuses upward, but is again taken up by the sheaths of the spinal cord, and there remains only a minute quantity of the substance injected, to reach the base of the brain, where it is anchored by the meninges in their turn Nothing or almost nothing is left for the cortex or optic nerve

The same thing happens with the mercurial or salvarsan solutions introduced into the spinal canal It could not be otherwise, since the salvarsanized or mercurialized intraspinal injections work very well in spinal syphilis, mostly in meningeal conditions Were the medication not anchored there, it would not have any beneficent effect That cocain or its derivatives injected intraspinally are almost instantaneously anchored by the spinal cord in the vicinity of injection is a fact which has been known for quite a long time and it illustrates very well the way intraspinal medication acts, when it has a chemobiologic affinity for certain tissues

Another reason why the spinal injection does not reach the brain cortex and optic nerves is that the fluid would have to rise against the current It is generally admitted that the center of secretion of cerebrospinal fluid is in the ventricles In leaving the fourth ventricle it flows in various directions, upward around the brain, outward around the cranial nerves and into the venous sinuses, and downward into the spinal canal The intraspinal injection has to be made under considerable pressure in order to overcome the downward tendency of the cerebrospinal fluid The anatomic configuration of the subarachnoid spaces in the convexity of the brain and around the optic nerves explains the difficulty under which a spinal injection is laboring to reach the intracranial tissues The greatest portion of the cranial subarachnoid space and that of the optic nerves is a spongy tissue consisting of an infinite number of cells intercommunicating with each other and separated by more or less delicate trabeculae The circulation in these spongy tissues is naturally not as free as in the cisternae, ventricles or spinal canal An injection of medication may diffuse with ease in the free subarachnoid room, but with great difficulty in the spongy spaces of the convexity of the brain and surface of the optic nerves

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[23] Flexner Simon Jour Exper Med. 1913
[24] Swift and Ellis Jour Exper Med 1913
[25] Horsley V Neurolog Centralbl 1910 xxix 1170
[26] Wardner D M Am. Jour Insan 1915 lxxi 4 9
[27] Marinesco and Mirea Rev neurol. 1913
[28] Sicard Jour med franç 1913

As we see, experimental research, physiologic considerations and anatomic arrangement of the subarachnoid spaces all argue against the efficacy of spinal medication for intracranial syphilis

A similar reasoning could be used for the discussion of the treatment of the so-called *metasyphilitic* optic nerve affections (tabetic and paretic optic atrophies) Antisyphilitic treatment of the so-called primary optic atrophy in tabes and paresis has invariably been a failure *in the hands of ophthalmologists* Mercury has been found to act *injuriously* on such nerves Intraspinal injections have not been a success The question may be repeated, Why does a parasyphilitic affection of the optic nerve not respond to treatment? The answer is the same as before The medication does not reach the optic nerve, or if it ever reaches it is in such a small quantity that it has a rather stimulating (?) action on the growth of the spirochetes Consequently, the spinal medication is not and cannot be efficient in the treatment of metasyphilitic or parenchymatous optic nerve affections It is rather superfluous to mention the other routes of medication (cutaneous, digestive, circulatory), their notorious failure is an established fact

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The cranial contents and optic nerves cannot be properly reached by any other route but that of the cranial subarachnoid space or the ventricles of the brain

Sharpe's and my own experiments have shown that intraventricular injections of trypan blue spread all over the cranial subarachnoid Golla, Mott[4] and Weed,[8] making cranial subarachnoid injections, have been able to follow the pigment and stain even into the perineuronic spaces Finally, I have actually seen in dogs, intravitam, the stain gradually spreading into the sheaths of the optic nerves a certain time after I injected it into the lateral ventricles

All these experiments point to one central idea, namely, that if we wish to have the *medication reach* the cerebral perineuronic spaces and the sheaths and septa of the optic nerves, we *have to introduce it right* into the cranial cavity, by way of the subarachnoid spaces or lateral ventricles For in the end the entire scope of the treatment is frustrated if the spirocheticide is not brought in immediate contact with the spirochetes, which are lodged in the perineuronic spaces of the brain in paretics and most probably *in* the sheaths of the optic nerve and between the neurons of the retina in the so-called primary optic atrophy

The slow current of the resorption taking place along the lymphatics of the sheaths of the cranial nerves, especially of the optic nerves, may be utilized with advantage for the treatment of a syphilitic process in this locality The medication, being in part slowly eliminated along the sheaths of the optic nerves, stays a longer time in contact with this nerve and is thereby given a better chance to act on the diseased tissues and their micro-organisms

Early Diagnosis—Like any other pathologic condition, syphilitic affections of the optic nerve have more chances to be attacked successfully when treatment is begun at the earliest possible moment before permanent damage is present Neurologists begin to realize that the preclinical stage of general paresis, before the degenerative process in the cortex has advanced too far, is the ideal time to begin the antisyphilitic treatment

Horsley[25] *insists that* the main thing in the treatment of syphilis of the central nervous system is early diagnosis and local treatment Collins[33] says that the only chance of success in treating general paresis is to begin it at the earliest possible moment

While this optimistic language regarding general paresis began to appear in the neurologic literature during the past few years, ophthalmologists remained as pessimistic as ever as to the outcome of primary optic atrophy (a condition so intimately allied with tabes and paresis)

Behr[34] has recently related four cases with beginning tabetic optic atrophy, progressing very rapidly to complete blindness during (in spite or because of) antisyphilitic treatment The sad progress of the tabetic and optic atrophy, no matter what is done, has paralyzed for a long time the attempts of ophthalmologists to do something for this class of patients In spite of all this, the great probability that this type of optic atrophies is due to the presence of spirochetes in the sheaths and in the interior of the optic nerves, that in the beginning these micro-organisms are localized at the periphery of the nerve mostly in its sheaths, and that only in a later stage they migrate into the nerve bundles and between the fibers, should cause us to double our efforts to recognize the earliest symptoms of optic nerve involvement and to attack the seat of lesion with the utmost vigor and in the most efficient way From this point of view every contribution toward the early diagnosis of incipient atrophy has a direct bearing on the final success in the treatment of this condition In other words, the therapeutic problem regarding the taboparetic optic nerve affections is a matter of First, how to recognize the earliest involvement of the optic nerve before the spirochetes become inaccessible, before the degeneration of the optic nerve fibers takes place Second, how best to get access to the spirochetes

The earliest diagnosis and the cranial subarachnoid route will eventually be the solution of the problem

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ABSTRACT OF DISCUSSION

Dr Udo J Wile, Ann Arbor, Mich I have been impressed with three very patent facts We should have had this information before we embarked on intraspinal or other subdural therapeutic measures, we are just on the threshold of the proper treatment of *syphilis of the nervous system* and of *syphilis of the optic* apparatus The introduction of *salvarsan or salvarsanized serum* into the subdural space may be said to be the first step The second I think will surely, as the results, perhaps, of Dr Schoenberg's work, be the introduction intraventricularly, surely a *simple* operation, of some spirocheticidal substance If one had *had the* careful anatomic and physiologic data which Dr *Schoenberg* has offered us, much of the enthusiasm which followed the first efforts at any form of intraspinal *medication* would surely have been tempered On the basis of the anatomic and physiologic data furnished by Dr Schoenberg's work and the very evident fact that at *least* in the laboratory animal *staining* substances do not reach the optic nerve itself when introduced intraspinally, how can one explain the very widely different clinical reports, many of them favorable, following the introduction into the spinal canal of salvarsan or salvarsanized serum? I think the explanation may be due partly to the new conception of syphilis of the nervous system With the assistance of your chairman we have, at the University Clinic, demonstrated that in the optic nerve itself is the first clinical evidence of central nervous involvement, which takes place as early as three or four weeks after infection We have three or four cases in which the retina itself showed evidence of inflammation This is easily explainable if we assume that in the nervous system the roseola occurs as in other parts of the body It is not simply a skin manifestation It occurs in the nervous system and in 70 per cent of cases of syphilis which go on to the seventh week We must assume that as the roseola disappears from the skin it also disappears from the nervous system, and so from the optic nerve, and many of the earlier reports of beneficial results which followed the use of salvarsan intraspinally may, indeed, be due to the natural course of the disease Any degenerative processes in the nervous system cannot be benefited by any form of treatment With general paresis or optic atrophy the only possible benefit that may be derived from the introduction into the intraspinal or intraventricular space is spirochetal death and the transitory appearance of inflammatory reaction Patients with certain diseases, among which is basilar meningitis, recover, because there is no degenerative process present In general paresis the patient is not benefited and cannot be benefited

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[33] Collins, Joseph The Recognition of General Paresis While It Is Still Susceptible to Treatment The Journal A M A, March 18, 1916, p 851

[34] Behr, C Klin *Monatsbl f Augenh*, 1916

Dr. James B Ayer, Boston One cannot read Dr Schoenberg's array of facts concerning the flow of cranial fluid and the necessary modifications of treatment in intracranial syphilis of the parenchymatous type without being greatly impressed by the truths expressed especially if he has like myself been relatively unsuccessful in the treatment of these conditions

In February of this year I decided that some form of intracranial lavage by salvarsanized serum was indicated but realized the difficulty of carrying out such procedure in early cases such as came to my hand So a middle course was attempted In two points craniotomy openings were made over the frontal pole and injections of serum given by the special route, followed by saline for a period of three quarters to one and one half hours under gradually increasing pressure up to 400-600 mm Subsequent puncture of the cranial subarachnoid showed the presence of the serum at this high level, not of course undiluted, but clearly recognizable. It was clear that serum could be safely forced upward "against the currents a fact noted experimentally by Weed, 1914 Four cases of optic atrophy and three of cerebral syphilis of other types are now under such treatment Two cases of advancing optic atrophy have had six such injections each over a period of three months Both show a stationary condition of vision, as tested by Dr Derby with whose cooperation I have carried on the work, and both show an amelioration of the Wassermann test a result we have hitherto been unable to accomplish Whether direct cranial injections are more efficacious I do not know but this relatively easier operation seems to offer a method well worth serious trial

Dr. Jesse S Wyler, Cincinnati The phorometric work by Carl Baer of Kiel impressed me. The connection of his work and that of Dr Schoenberg is manifest, for by this means we should be able to make a rapid and early diagnosis of optic atrophies and obtaining this diagnosis we may be able to get results which hitherto have been impossible By means of a specially constructed phorometer it was found that long before any pupillary signs or other symptoms of tabes were manifest there was a notable impairment of the light sense in the ability of the eye to adapt itself to varied degrees of light and the degrees in this perception increased as the other symptoms increased Baer concludes that in this early stage there is only a little nerve infiltration and very few spirochetes in the nerve and if the antisyphilitics reach the diseased nerve at this time results may be obtained but at later periods where there is considerable infiltration and nerve degeneration, all antisyphilitic medication will be worthless, because salvarsan causes fresh infiltration and this merely blocks out some of the fibers which were still intact The results obained were an improvement, on the average, and probably with this early means of diagnosis and Dr Schoenberg's intraventricular therapy, a new era may be for those for whom in the past the prognosis has been most unfavorable

Dr George S Derby, Boston It may not be out of place simply to try to quote what Dr Swift said in his address in Washington, that prevention is better than cure, that logically all patients with syphilis should receive spinal puncture before treatment is concluded to see whether involvement of the central nervous system has taken place, and if the examination of the spinal fluid gives a positive result, the patient should immediately be put under suitable medication

Dr Mark J Schoenberg, New York It was my good fortune to find a number of patients in the clinic who came in with optic atrophies and who had had in the department of dermatology repeated spinal injections Some of them did more or less well in the sense that those who had vision of more than $^{20}/_{100}$ kept that vision for a certain length of time They received at least twenty-five intraspinal injections, and the man who administered the injections was enthusiastic over the results My answer to this favorable report is that if we are able to maintain the vision of those who have beginning optic atrophy by injecting a chemical agent into the spinal canal, then so much the more should we obtain good results by addressing the curative agent direct to the seat of the lesion by intraventricular injections We must not forget that when we inject any agent into the spinal canal it is immediately anchored by the meninges Any of the substance which has not been anchored will go up into the cranial cavity, but how much will go we do not know, probably a small percentage It depends on the affinity between the substance injected and the meninges of the cord If some reaches the intracranial cavity, some of it will be anchored by the meninges of the brain and only a small portion of it will reach the optic nerve So that if we get some result by the intraspinal injections, we should get more by the intraventricular

I wish to protest against the term used by Dr Wyler There is no Schoenberg's intraventricular therapy It is simply suggestions from experimental work which must be done by other men over and over again before we find a great deal to recommend it for the treatment of optic atrophy

The earlier we begin our treatment the better Dr Ayer's work interested me immensely I believe there is some value in his conception, but I must repeat the argument I made before, that if we are able to do good through the intraspinal route, then we should obtain still better results by introducing the substance directly into the cranial cavity

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Toronto and Typhoid—Toronto had a total of 151 cases of typhoid fever in 1915 It was found that sixty-nine of the total number of cases were contracted outside of Toronto, thirteen were infected by contact, one was in a worker removing night soil, one was in a sewage worker, one drank raw lake water, no infections from oysters, none from milk, and the source of infection was not traced in sixty-six There was a total of nine deaths Of the sixty-nine outside cases, five patients died, of the eighty-two inside cases, four patients died The following statitstics show how the death rate from typhoid fever has decreased since 1910 per 100,000 1910 40 8, 1911, 20 0, 1912, 12 1 1913 10 4, 1914, 7 5, and 1915 1.9 This appears to be the lowest death rate from typhoid of any city in America, Newark, N J, being 2 7, and Milwaukee, 4 6 Montreal appears high with a death rate of 22.7 Toronto has reduced its typhoid by effective chlorination of the drinking water, pasteurization of the city milk supply since 1912 except the certified milk, by education through circulars left in every house in which a case develops and by urging hospitals to employ antityphoid inoculation for their nurses and orderlies In 1910 there were 204 deaths in Toronto from typhoid noid room, but with great difficulty in the spongy spaces of the convexity of the brain and surface of the optic nerves

As we see, experimental research, physiologic considerations and anatomic arrangement of the subarachnoid spaces all argue against the efficacy of spinal medication for intracranial syphilis

A similar reasoning could be used for the discussion of the treatment of the so-called metasyphilitic optic nerve affections (tabetic and paretic optic atrophies) Antisyphilitic treatment of the so-called primary optic atrophy in tabes and paresis has invariably been a failure in the hands of ophthalmologists Mercury has been found to act injuriously on such nerves Intraspinal injections have not been a success The question may be repeated, Why does a parasyphilitic affection of the optic nerve not respond to treatment? The answer is the same as before The medication does not reach the optic nerve, or if it ever reaches it is in such a small quantity that it has a rather stimulating (?) action on the growth of the spirochetes Consequently, the spinal medication is not and cannot be efficient in the treatment of metasyphilitic or parenchymatous optic nerve affections It is rather superfluous to mention the other routes of medication (cutaneous, digestive, circulatory), their notorious failure is an established fact

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Sharpe's and my own experiments have shown that intraventricular injections of trypan blue spread all over the cranial subarachnoid Golla, Mott[4] and Weed,[5] making cranial subarachnoid injections, have been able to follow the pigment and stain even into the perineuronic spaces Finally, I have actually seen in dogs, intravitam, the stain gradually spreading into the sheaths of the optic nerves a certain time after I injected it into the lateral ventricles

All these experiments point to one central idea, namely, that if we wish to have the medication reach the cerebral perineuronic spaces and the sheaths and septa of the optic nerves, we have to introduce it right into the cranial cavity, by way of the subarachnoid spaces or lateral ventricles For in the end the entire scope of the treatment is frustrated if the spirocheticide is not brought in immediate contact with the spirochetes, which are lodged in the perineuronic spaces of the brain in paretics and most probably in the sheaths of the optic nerve and between the neurons of the retina in the so-called primary optic atrophy

The slow current of the resorption taking place along the lymphatics of the sheaths of the cranial nerves, especially of the optic nerves, may be utilized with advantage for the treatment of a syphilitic process in this locality The medication, being in part slowly eliminated along the sheaths of the optic nerves, stays a longer time in contact with this nerve and is thereby given a better chance to act on the diseased tissues and their micro-organisms

Early Diagnosis—Like any other pathologic condition, syphilitic affections of the optic nerve have more chances to be attacked successfully when treatment is begun at the earliest possible moment before permanent damage is present Neurologists begin to realize that the preclinical stage of general paresis, before the degenerative process in the cortex has advanced too far, is the ideal time to begin the antisyphilitic treatment

Horsley[26] insists that the main thing in the treatment of syphilis of the central nervous system is early diagnosis and local treatment Collins[33] says that the only chance of success in treating general paresis is to begin it at the earliest possible moment

While this optimistic language regarding general paresis began to appear in the neurologic literature during the past few years, ophthalmologists remained as pessimistic as ever as to the outcome of primary optic atrophy (a condition so intimately allied with tabes and paresis)

Behr[34] has recently related four cases with beginning tabetic optic atrophy, progressing very rapidly to complete blindness during (in spite or because of) antisyphilitic treatment The sad progress of the tabetic and optic atrophy, no matter what is done, has paralyzed for a long time the attempts of ophthalmologists to do something for this class of patients In spite of all this, the great probability that this type of optic atrophies is due to the presence of spirochetes in the sheaths and in the interior of the optic nerves, that in the beginning these micro-organisms are localized at the periphery of the nerve mostly in its sheaths, and that only in a later stage they migrate into the nerve bundles and between the fibers, should cause us to double our efforts to recognize the earliest symptoms of optic nerve involvement and to attack the seat of lesion with the utmost vigor and in the most efficient way From this point of view every contribution toward the early diagnosis of incipient atrophy has a direct bearing on the final success in the treatment of this condition In other words, the therapeutic problem regarding the taboparetic optic nerve affections is a matter of First, how to recognize the earliest involvement of the optic nerve before the spirochetes become inaccessible, before the degeneration of the optic nerve fibers takes place Second, how best to get access to the spirochetes

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Dr Udo J Wile, Ann Arbor, Mich I have been impressed with three very patent facts We should have had this information before we embarked on intraspinal or other subdural therapeutic measures, we are just on the threshold of the proper treatment of syphilis of the nervous system and of syphilis of the optic apparatus The introduction of salvarsan or salvarsanized serum into the subdural space may be said to be the first step The second I think will surely, as the results, perhaps, of Dr Schoenberg's work, be the introduction intraventricularly, surely a simple operation, of some spirocheticidal substance If one had had the careful anatomic and physiologic data which Dr Schoenberg has offered us, much of the enthusiasm which followed the first efforts at any form of intraspinal medication would surely have been tempered On the basis of the anatomic and physiologic data furnished by Dr Schoenberg's work and the very evident fact that at least in the laboratory animal staining substances do not reach the optic nerve

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[33] Collins Joseph The Recognition of General Paresis While It Is Still Susceptible to Treatment The Journal A M A, March 18, 1916, p 851

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Temperature Record February 3 4 a m 98 6 4 p m 98, 8 p m 98 6 midnight 100 February 4 4 a m, 99 2, 8 a m, 99, 4 p m 100 6, 8 p m 100 6, midnight 100 February 5, 4 a m 99 8 a m 98 8, noon, 98 6

Following this injection the patient complained of severe pain in the legs, it was necessary to give a sedative before the patient could sleep Cell count at the time of injection revealed 21 lymphocytes per cubic millimeter, eight hours after injection 1 280 cells 94 per cent polymorphonuclears, 6 per cent lymphocytes

Case 2.—The diagnosis was general paresis Examination of the spinal fluid revealed 16 lymphocytes per cubic millimeter The Wassermann reaction was 4 plus The Nonne reaction was plus In the Lange test the first five tubes were affected

First Injection—Jan 22, 1916 at 11 a m, 0 01 grain of mercuric succinimid in 20 c c of spinal fluid was injected

Temperature Record January 22 4 p m 98 8 p m, 100 6, midnight, 101 January 23 4 a m 101.2 8 a m 100 8 4 p m., 101 2 January 24 4 a m, 99, noon 101 6, 4 p m 101.2, 8 p m, 99 6 January 25, 4 a m, 99 8 noon 99 2 January 26 4 a m 99 8

The cerebrospinal fluid twenty-four hours following the injection of mercury showed 1,200 cells per cubic millimeter, 44 per cent lymphocytes 56 per cent polymorphonuclears During the first twenty-four hours there were insomnia and restlessness

Second Injection—Feb 10 1916, at 9 p m, 0 01 grain of mercuric chlorid in 20 c.c of spinal fluid was injected Cell count revealed 6 lymphocytes The Nonne reaction was plus

Temperature Record February 10 4 a m 98 noon, 98 4 February 11 4 a m 99 4 8 a m 100.2 noon 101 4, 4 p m 102.2 8 p m 101 4 midnight 99.2 February 12 4 a m 100, 8 a m., 99 6, 4 p m., 101 4 8 p m, 99 6 February 13, 4 a m. 99 8 noon 99 4 8 p m, 99 4

Following the injection the patient did not complain of any pain There were insomnia and restlessness on the night following the injection

Case 3—The diagnosis was tabes dorsalis

First Injection—Feb 23 1916 at 8 30 p m 0 02 grain of mercuric succinimid in 20 c.c of spinal fluid was injected

Temperature Record February 23 4 a m., 98, noon 98, midnight 100.2 February 24 4 a m 100 4, 8 a m 100 6 noon 102 8, 4 p m 101 8 February 25 4 a m 100 6 8 a m 100 4 p m 100 4, 8 p m 100 4 midnight 98 February 26 4 a m 98 8 a m., 98 6 noon 98 6 4 p m 98 6 8 p m 98

Following the injection the patient had severe pains during the night lancinating in character These continued the following day The patient also had a drawing and aching sensation in the thighs and vomited once in the early morning February 25 the patient still had pain in the legs and thighs but no nausea. February 26 the patient was quite comfortable. The spinal fluid findings at the time of the injection revealed 90 lymphocytes, the Nonne reaction was plus, the Wassermann 4 plus Forty-four hours following injection the fluid had a slight yellowish tint Cell count revealed 446 cells (72 per cent polymorphonuclears)

In fifteen cases treated in the same manner similar symptoms were noted

Pain was rather severe, localized in the back and extending down the limbs in all of the cases

There was retention of the urine in two cases which lasted for twenty-four hours, requiring catheterization The patients had no trouble after the first twenty-four hours

There were insomnia and restlessness in four cases

There were headache and pain extending down the back in ten cases

A rise in temperature ranging from 99 to 103 F was noted during the first twenty-four hours in all the cases The temperature began to rise about four or five hours earlier following the injections of the mercuric chlorid and succinimid than following the injections of mercurialized serum

Nausea and vomiting occurred in three cases during the first twenty-four hours

The cell count in the spinal fluid during the first twenty-four hours following injection ranged from 300 to 2,000 cells per cubic millimeter During this period the polymorphonuclear leukocytes predominated with a gradual return to a lymphocytosis later The period of increased cell count lasted on an average about seventy-two hours

Urticaria was present in two cases following the injection of mercurialized serum The patients, as a rule, did not complain of so much pain following the injection of the serum when administered for the first time, but seemed to show a stronger reaction with each succeeding injection, while with the salts of mercury the reaction did not appear quite so strong with each succeeding injection Some of the patients expressed a feeling of improvement a week or two after the injection, and requested further treatment No statement can be made at this time as to the ultimate results following these injections However, if Lange's observations on reactions obtained from the spinal fluid, even when the blood showed negative findings, were accurate, it seems in order to employ some form of intraspinal treatment In administering the mercuric chlorid we would recommend doses of 1/100 grain when using the spinal fluid as the vehicle This can be made up in a 1 per cent solution so that 1 minim represents the dose This should be thoroughly mixed with the spinal fluid before reinjecting We would not advise using less than 20 c c of the spinal fluid as a vehicle for this amount of mercury The technic which we have employed has been described in a previous article

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THE FREQUENCY OF UNSUSPECTED SYPHILIS

WITH SPECIAL REFERENCE TO ITS INCIDENCE IN SO-CALLED NEURASTHENIA *

JAMES S McLESTER, M D
BIRMINGHAM, ALA.

The routine use of the Wassermann reaction has brought about some interesting revelations, and, applied to large numbers of hospital patients, shows the surprising prevalence of syphilis In private practice, however, observations are made on patients representing a different social level, and should offer light on this social disease from another angle

The Wassermann reaction has been used in my private work in a routine manner, without regard to history or complaint, and I wish to report on 300 consecutive patients It is only fair to state that practically all of these patients were seen in consultation or were referred by other physicians, and thus presented more or less difficult or obscure disease conditions I assume, therefore, without entering on a discussion of the value of the Wassermann test, that the number of positive Wassermanns here reported gives a fair indication of the role played by syphilis in the more obscure syndrome of internal medicine

The tests were done by Miss Blanche Frazier, who has had abundant experience, including several months' training with Professor Zinsser, and whose results are to be relied on The half Wassermann was employed, using an antisheep hemolytic system, two units of amboceptor, and straight alcoholic extracts of both human and beef heart as antigens

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* Read at the meeting of the American Society for Clinical Investigation Washington D C May 8 1916

* Case reports will appear in the reprints a copy of which can be had on application to the author

Of the 300 patients, fifty-six, or 18.8 per cent., gave a positive Wassermann reaction In reviewing this series, one is tempted to paraphrase the familiar statement that hysteria can simulate any disease complex by saying that syphilis can produce any disease complex

Of the fifty-six positive cases, twenty-two, or 39 per cent., gave a history more or less complete of syphilis, while thirty-four, or 61 per cent., gave no such history, either direct or suggestive

The most important group — the subject of this report — was formed by the neurasthenics There were thirty-two patients who, according to current usage, must be given the diagnosis of neurasthenia I use the word "neurasthenia" for want of a better, in the general rather than the restricted sense, to indicate that indefinite group of emotionally unbalanced individuals who, given to introspection, come to the physician — in time to many physicians — with the greatest variety of complaints, none of which seem to rest on a demonstrable physical basis Asthenia, bodily or mental, is not necessarily a prominent symptom, for many of these patients are vigorous and are of good judgment except where their own physical well-being is concerned In a stricter sense, perhaps, some should be called hypochondriacs In ordinary clinical experience, however, all patients with such functional neuroses are classed together as neurasthenics

Of this group of thirty-two, fifteen, or approximately 50 per cent., gave a positive Wassermann reaction Beyond this finding, none of these patients gave other evidence of disease Three patients with apparent neurasthenia, each with a positive Wassermann reaction, of whom two have myocardial troubles and one arthritis, are not included Other instances of neurasthenia with a positive Wassermann reaction have been observed in medical wards of the Hillman Hospital, but cannot fairly be included in this group of private patients

Of the fifteen neurasthenics with a positive Wassermann reaction, only two gave a history of syphilis

Slight myocardial incompetency and early tuberculosis have been given prominence as causes of neurasthenia, while syphilis in this connection has received but scant attention Textbooks mention it casually, and I know of but one author who ascribes to syphilis anything like a leading rôle in the causation of functional nervous troubles

It is unfortunate that the cerebrospinal fluid of only five of these patients was examined One of these gave a positive Wassermann (four plus), cell count of ten, Ross-Jones three plus, Pandy two plus, and Lange's colloidal gold reaction showed a characteristic paretic c[illegible] [illegible] Another gave a four plus Wassermann, while [illegible] three patients were negative to all of these tes[illegible] spinal [illegible] such circ[illegible]

THE QUESTION OF PARESIS

The ques[illegible] [illegible] naturally arises, Are not some of these patients earl[illegible] It is of course, impossible to answer with absolute certainty, since general paresis in the very beginning may present a "neurasthenoid stage," and such patients have the appearance of typical neurasthenia I can only say that the mental and other symptoms by which we usually recognize general paresis were in these cases missing The pupillary abnormalities, the characteristic mental and moral changes, the tremors, and the speech, trophic and sensory disturbances were all absent The typical paretic's symptoms are elicited with some effort, while the neurasthenic forces on us a recital, frequently a long one, of his troubles The one is indifferent to his disabilities, while the other is acutely conscious of them Measured by such clinical standards, none of these patients are paretics

How then are we to regard these so-called neurasthenics who give evidence of syphilis? Is the cerebrospinal nervous system under the influence, directly or indirectly, of some syphilitic toxin — a sort of focal infection? Is this a mild, an essentially chronic form of cerebrospinal syphilis? Or, are these patients, after all, paretics of a peculiar type? Perhaps both of the last two questions may at times be answered in the affirmative Certainly, all such patients with a positive Wassermann reaction are potential paretics

CONCLUSIONS

From a study of these 300 patients, two conclusions seem warranted first, that syphilis is a vastly more important factor in internal medicine than is commonly thought and, secondly, that a large number of so-called neurasthenics are infected with syphilis and possibly present a mild form of cerebrospinal syphilis

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VACCINE THERAPY AND OTHER TREATMENT IN ACNE VULGARIS AND FURUNCULOSIS

HAROLD H FOX, M.D.
ITHACA, N Y

As a result of observations made in the medical advisers' office at Cornell University, the writer's attention was attracted to the great prevalence of acne vulgaris and furunculosis among young men A study of the examination records of the entering students showed that 30.2 per cent. of the freshmen class suffered from acne vulgaris Of this proportion, the distribution of the lesions in 17.8 per cent. was general and in 12.2 per cent. of the cases it was limited to the facial region

In order to ascertain just what results could be expected from the different forms of therapeusis, and more especially to try out the efficacy of vaccine therapy in the treatment of acne vulgaris and of furunculosis, an analysis of 100 unselected cases of these two forms of pyogenic dermatoses was undertaken

The cases were all considered chronic, in that they were all of six months' or more duration, and no case was included in which the eruption could possibly be ascribed to drugs, to occupation, or to syphilis No attempt was made to study the bacterial etiology of either condition, except in so far as was necessary for the preparation of the autogenous vaccines, since that has been so well worked out by previous investigations, and also because ordinarily the stock vaccines are prescribed on the basis of a clinical diagnosis

Previous consultations had shown that a large number of the patients ascribed their condition to dietetic errors, the most common of which was the ingestion to excess of sugar, candies, pastries, or to digestive disturbances, such as constipation Consequently, all the patients studied were instructed before beginning treatment to avoid such foods as seemed to disagree with them, not to eat to excess, to eat slowly and at regular intervals, to drink plenty of water, especially on rising in the morning, to see that the organs of elimination were functioning normally, or if they were not, to consult the physician in charge before resorting to medical correctives Locally, they were to remove the comedones by gentle massage, after first having relaxed the skin by applications of towels wrung out in hot water Following the removal of the blackheads, they were advised to apply to the face towels wrung out in cold water, in order to tone up the skin and cause a diminution in the size of the pores Generally speaking, the directions were fairly well carried out

For purposes of classification and study it was deemed advisable to group the cases in three tables Table 1 shows the number of cases each of acne vulgaris and of furunculosis treated, their distribution, duration and certain apparent contributory factors in their etiology, and finally the form of treatment used, with the total number receiving such treatment

Table 2 gives in detail the course and results attained by vaccine therapy, and the average number of days between treatments The average number of treatments per case, and the total number of cases treated Previous observations had led us to believe that the fine type of acne vulgaris responded less favorably to vaccines than the coarse variety, so in Table 2 the acne cases were divided into a coarse and fine type, and these two classifications were again subdivided into, first, those in which the majority of the lesions were pustular, second, those in which the majority of the lesions were papular, and third, those in which the pustular and papular elements were present in about equal proportions Furuncles were not classified under subheadings

TABLE 1—NUMBER OF CASES OF ACNE VULGARIS AND OF FURUNCULOSIS THEIR DISTRIBUTION DURATION ETIOLOGY AND TREATMENT

Disease	Number of Cases	Facial	General	Average Duration Years	Season When Worse		Sporadic	Comedones Marked	Athletics	Dietetic Errors	Digestive Disturbances	Therapeutic Measures			
					Winter	Summer						Vaccines	Local	Combined	Medical
Acne vulgaris	74	51	23	3 to 4	16	28	30	15	0	15	10	53	15	3	3
Furunculosis	26	4	22	6¼ to 1	3	8	15	4	9	7	4	9	7	7	8

TABLE 2.—DETAILS OF TREATMENT BY VACCINE THERAPY IN CASES OF ACNE VULGARIS AND FURUNCULOSIS

Disease	Number of Cases		Average Number of Treatments per Case		Average Number of Days Between Treatments		Results Noted During Treatment			Results Noted Three Months After Cessation of Treatment				Percentage Improved After Three Months		Percentage Cured After Three Months	
	Autog	Stock	Autog	Stock	Autog	Stock	Improved	No change	Worse	Improved	No change	Worse	Cured	Autog	Stock	Autog	Stock
Acne vulgaris coarse																	
Majority of lesions pustular	1	8	8	4	3	4.2	4	5	0	1	7	0	1	100	12.5	0	12.5
Majority of lesions papular		9		3.2		2.6	4	5	0	4	5	0	0		44+		0
Papular and pustular lesions evenly divided	2	15	6	4.6	3.76	3.39	9	8	0	3	14	0	0	0	2	0	0
Acne vulgaris fine																	
Majority of lesions pustular		8		4		3	0	3	0	0	3	0	0		0		0
Majority of lesions papular		7		5+		3.9	3	4	0	1	6	0	0		14+		0
Papular and pustular lesions evenly divided	1	7	12	3.5	3	2.72	3	5	0	0	8	0	0	0	0	0	0
Totals	4	49	8	4.1+	3.38	3.3+	23	20	0	9	43	0	1	25	18+	0	2+
Furunculosis	2	7	10	4	4	3	4	3	0	0	4	0	3	0	0	0	42+

Table 3 gives in percentages the results attained by the different forms of treatment three months or more after cessation of all treatment

Further consideration of Table 1 exhibits, as perhaps its most striking datum and one not generally brought out by writers on the subject, the fact that in the seventy-four cases of acne treated not one of the cases developed in a student engaged in athletics The writer does not mean to imply that acne has never occurred in athletes, but he wishes to point out that the table shows the great part athletics plays in the prevention of acne This may be explained on Stein's[1] theory, that acne is caused in part by certain disturbances of the sexual functions, which in turn cause hyperactivity of the sebaceous glands, so that athletics, by furnishing a normal outlet for the superabundant energy, diminishes the production of sebum, and so prevents or cures acne I am rather inclined, however, to accept the general view that the beneficial effect of athletics upon acne is due, not to the athlete's strenuous muscular exertion itself, but rather to the more regular habits and the strict personal hygiene required of the student representing his college in any form of athletics On the other hand, however, it will be noted that nine cases of furunculosis, out of a total of twenty-six, occurred among students engaged in athletics These cases, I believe, were due to direct infection, and without exception, occurred among the wrestlers and crew men, the location of the lesion being typical of the cause of the trouble, so to speak, among crew men, the lesions were on the buttocks, due to minute abrasions caused by sliding on the rowing seats, and consequent enforced entry of pyogenic bacteria In wrestlers the lesions were of like nature, usually on the arms, neck and legs, the parts most frequently exposed to trauma Dietetic errors and digestive disturbances accounted for from one third to one half the cases in each group Comedones were not found so frequently as many writers would lead us to expect A majority of the cases in each group were sporadic, but of those influenced by seasonal variation, the larger number of cases occurred in the summer The cases of acne showed longer average duration than the cases of furunculosis, the period of duration being from three to four years for acne, for furunculosis six months to one year It is interesting to note that although of the entire freshmen class the larger percentage of the cases of acne were of general distribution, over twice the number of students who applied for treatment did so for the facial type of acne

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[1] Stein R O Med Klin, Jan 23 1915 p 85

Under the heading local treatment were included all applications made directly to the eruptions In some instances this meant ointments or lotions, in others, particularly the coarse pustular type, and especially in furunculosis, local treatment includes evacuating the pus by free incisions, and applications of wet dressings Combined treatment includes those cases in which the patient received the vaccines in conjunction with the local treatment Medical treatment includes cases in which the patient was treated only by medicines taken internally, such as calcium sulphid and cod liver oil

TABLE 3—CONDITION OF PATIENT THREE MONTHS OR MORE AFTER CESSATION OF TREATMENT

Disease	Results of Local Treatment, Percentages				Results of Combined Treatment, Percentages				Results of Vaccine Treatment, Percentages				Results of Internal Medical Treatment, Percentages			
	Improved	Cured	No change	Worse	Improved	Cured	No change	Worse	Improved	Cured	No change	Worse	Improved	Cured	No change	Worse
Acne vulgaris	60	6+	33	0	100	0	0	0	17+	1+	81+	0	66+	0	33+	0
Furunculosis	14+	85+	0	0	14+	85+	0	0	0	33+	66+	0	66+	33+	0	0

A study of Table 2, or those cases in which the patients were treated by vaccines, shows that not one patient with acne seen three months or more after cessation of treatment was cured by autogenous vaccine, on the other hand, autogenous vaccines were credited with causing permanent improvement in 25 per cent, and stock vaccine in 18 per cent of the cases The coarse type of acne comprised cases in which the diameter of the majority of the lesions exceeded a pin head in size, 22 8 per cent of these patients were permanently improved, 2 8 per cent cured The fine type, or those in which the majority of the lesions were pin head or less in diameter, exhibited but 5 5 per cent of the patients improved, none cured

A closer study of Table 2 will show what may be the explanation of the reason certain physicians so enthusiastically recommend vaccine therapy in acne and allied conditions, namely, that improvement is much more frequently noted during treatment than on examination of the patient at a much later date In this series twenty-three out of fifty-three patients exhibited improvement during treatment, but three months after the treatment was discontinued only nine showed any change for the better The average number of days between treatments and the average number of treatments per patient were respectively, for autogenous vaccines 3 38 days, and eight treatments, for stock, 3 3 days, 4 1 treatments, the period between treatments being governed by the reaction We always waited, as advised by the manufacturers of the vaccines, until the severity of the reaction, if any reaction occurred, passed away, before giving a second dose[2] In general, the directions given by the manufacturers for the dosage and administration of the vaccine were sedulously followed

Dennie and Bufford[3] state that "autogenous vaccines were superior to stock, excepting in the treatment of furunculosis, in which no difference could be seen" As may be seen by comparing the percentage totals of the cases of acne and of furunculosis, as shown in Table 2, our results do not coincide with the latter portion of their statement In our series none was improved or cured by autogenous vaccines Of all the patients treated, in no instance did the eruption appear to be rendered worse by any form of treatment used However, two patients who received the autogenous vaccine for acne developed such alarming symptoms, following the first injection, high fever, headache, nausea, dizziness, and very severe local symptoms, that the treatment was discontinued Wallace,[4] Hitchins,[5] and others have reported cases manifesting untoward symptoms of like nature following the injections of bacterial vaccines, the reaction probably being of an anaphylactic nature, and the possibility of such an occurrence should be borne in mind

A comparison of the results expressed in percentages, as shown in Table 3, indicates that under the heading furunculosis there was no difference to be noted in the results of the local treatment and of the combined treatment In each instance 14 per cent of the patients were improved and 85 per cent cured, leaving one the deduction that probably in the group of patients receiving combined treatment most, if not all those who responded favorably did so to the local treatment received

The acne patients gave somewhat different results, every one was improved, but none cured, by the combined treatment Local treatment, improved 60 per cent, cured 6 per cent and produced no change in 33 per cent In the group treated by vaccines alone, stock and autogenous, 17 per cent of the acne patients were improved, only 1 per cent cured and 81 per cent showed no change As might be expected, furunculosis showed much better results following combined treatment, 33 per cent being cured Internal medical treatment did not give the results hoped for Calcium sulphid is not, as has been claimed, a specific for acne or furunculosis I believe that the favorable results classified as due to internal medicine could not be ascribed to any direct action of the medicine itself, but rather to the improvement of the physical condition of anemic patients by the use of such medicines as cod liver oil, iron, arsenic, strychnin, bitter tonics, etc , by stimulating the excretory organs, by regulating the habits, and by improving the personal hygiene

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[2] Blatteis, S R Med Rec., New York, 1914 lxxxvi 373

[3] Dennie and Bufford Boston Med and Surg Jour, 1915 clxxiii 910

[4] Wallace R An Unusual Case of Vaccine Anaphylaxis The Journal A M A, April 11, 1914 p 1166

[5] Hitchens, A P Interstate Med Jour, 1914, xxi, 537

CONCLUSIONS

Our investigation would seem to demonstrate, first the important part played by personal hygiene in the cause, prevention, and treatment of acne vulgaris and furunculosis, second, the superiority of well-known therapeutic measures over vaccine therapy in the conditions studied, and third, the value of following up the cases to ascertain the number of permanent improvements, since experience has shown that the results attained during the time of treatment are no criteria of the changes to be seen in the eruption at a later date

As T J Horder[6] has well said "The failures of vaccine therapy are probably more numerous than its successes "

317 College Avenue.

A CASE OF GRANULOMA PYOGENICUM AFFECTING THE EYELID[*]

CASSIUS D WESCOTT, M D

CHICAGO

May 16, 1914, Harold B , aged 9 years, was referred to me by Dr George W Webster of Chicago, because of a tumor of the eyelid The history, obtained from Dr Webster and the boy s guardian, was of a small tumor, apparently a sebaceous cyst, which was first noticed eight or ten weeks before, just above the cilia of the upper lid of the left eye About two weeks before his visit to me the appearance had suddenly changed to that of a blood blister, which in a few days was so prominent that a silk thread was tied around it with the idea of strangulating and removing it Instead of drying and dropping off, as had been expected, the tumor evidently became infected, grew larger and bled easily when it was touched

On examination, I found a teat-shaped mass of dark red color projecting from above the lid edge, apparently coming through the skin rather than growing from it, being surrounded by normal integument, as with a collar The boy's guardian was extremely anxious about his condition, as his father had recently died of carcinoma of the face I had never seen such a tumor, and suggested that Dr W A Pusey, professor of dermatology in the University of Illinois, College of Medicine, be consulted He at once made the diagnosis of granuloma pyogenicum, and a slide which I had made from a bit of the tip of the tumor confirmed the diagnosis The following is from Dr Pusey's report to me after seeing the patient

'Granuloma pyogenicum, of which this case is a type, is a condition which pathologically is very simple, but clinically is extremely confusing The lesions first show as a minute bright red to dark red tumor This grows rapidly until it reaches the size of a half pea or hazelnut, or larger, and then remains stationary or, it may be, shrinks slightly and becomes denser A developed lesion may be a prominent sessile tumor, popping up through a thick horny collar, or a flattened dome-shaped red mass of the diameter of a pea or hazelnut kernel with a similar collar The early lesions are usually denuded of horny epidermis, bright red, soft, and bleed easily, the older lesions have a thin translucent layer of horny epidermis over them, and so are less intensely colored, are fairly firm to the feel and do not bleed unless wounded In my experience, they are usually not painful or tender They occur on the face and hands by preference As they persist for weeks or months and stubbornly return if not completely destroyed, they are very apt to be a source of perplexity, if not anxiety

"The two conditions which they simulate are malignant tumors and chancres On the face they arouse fears of malignancy, and I recall one flattened round lesion on the finger of a dentist which I was able to differentiate from a chancre only by the most careful study As the lesions are not infrequent, their recognition is a matter of considerable practical importance The lesions are in the beginning masses of highly vascular granulations produced by infection with staphylococci of slight virulence Later they become a mass of well organized connective tissue riddled with blood vessels The most striking and characteristic feature is the great number of new blood vessels, which may be so numerous as to suggest an angioma

'Simple as the lesions are, they have been the source of no end of clinical, pathologic and bacteriologic confusion The cases were first described in 1897 by Poncet and Dor as botryomycosis hominis By 1902 Bodin and others had demonstrated that the organisms producing the lesions were not botryomyces but staphylococci And in 1904 Hartzell clearly established the true character of the lesions and suggested the name granuloma pyogenicum "

May 28, under ether anesthesia, I removed the tumor by a clean incision with curved scissors, down to the tarsus, curetted the base and skin edges and cauterized the wound with solid silver nitrate The eye was dressed with White's ointment, and the wound healed without infection and with a very small scar

The patient reported Sept 13, 1914, and there had been no recurrence, and the cilia were only slightly disturbed I have recently seen him again, and there is still no recurrence

In 1906, Dr Pusey[1] published an excellent paper on vegetating dermatoses in which reference is made to granuloma pyogenicum In 1910, Wile[2] published an elaborate article on granuloma pyogenicum with complete bibliography

22 East Washington Street

ABSTRACT OF DISCUSSION

Dr Lee M Francis, Buffalo As Dr Wescott suggests, granuloma pyogenicum had had a clinical identity only since 1897 As far as I am able to gather, this is the first case involving the eyelids to be reported, although it is not clear why the growth should not have been more frequently observed in this area The lids, frequently exposed to abrasion and infection from meddling fingers, with a very thin and loosely attached integument, offer a favorable site of low resisting power to bacterial invasion As stated, the causal factor is probably a staphylococcus of low virulence implanted in an unfavorable soil The lesions develop most frequently on the fingers, feet and face, although no part of the body is immune Sutton (The Journal, May 20, 1916, p 1613) has reported three cases occurring on the lips Wile (*Jour Cutan Dis*, December, 1910) has pointed out that granuloma pyogenicum presents a uniform histologic appearance, essentially that of circumscribed granulation tissue, rich in thin walled blood vessels with mononuclear and polynuclear infiltration According to Wile the condition also presents certain rather constant clinical aspects which serve to identify it namely, a pedicle, tendency to hemorrhage when touched rapid growth and proneness to recurrence, if not thoroughly ablated and its base carefully cauterized To this should be added the previous history of injury It must not be forgotten that the latter may be very minute, as for example, an insect bite Stellwagon has commented on the resemblance between granuloma pyogenicum and the raspberry or strawberry-like growth sometimes following vaccination (usually unsuccessful) As Dr Wescott has said, granuloma pyogenicum might be confused with the initial lesion of syphilis and malignant growth The lack of induration and of regional lymph involvement differentiates it from the former, while the patient's age, slower growth, and absence of a precancerous stage, such as hyperkeratotic patches, would differentiate it from the latter The final analysis must be left to the pathologist and bacteriologist

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[6] Horder T J Lancet London, Jan 31 1914 p 310

[*] Read before the Section on Ophthalmology at the Sixty Seventh Annual Session of the American Medical Association Detroit June 1916

[1] Pusey W A Jour Cutan Dis December 1906

[2] Wile Jour Cutan Dis December 1910

Dr. Udo J Wile, Ann Arbor, Mich The cases I described were three It seemed a subject of more than unusual interest. The diagnosis of sarcoma has so frequently been made in cases of pyogenic granuloma that many persons have suffered the loss of a finger, hand or arm when sarcoma was suspected Before I began the histologic study of this type of tumor it was known that the staphylococcus was the basis of it, but we did not know why it should produce a fungating type of lesion with a granulomatous base If the explanation I have offered is correct, it would seem that the injury—the site of the injury—is a most important factor in the development of the tumor The staphylococci are implanted in the intima of the blood vessels We have an actual blood-vascular tumor This explains why simple ablation does not result in a cure If ablated level with the surface or even below it, the tumors usually return with an increase in their growth If, however, the offending blood vessel focus of infection is cauterized, they are permanently cured

Dr John E Weeks, New York In this connection I wish to inquire whether the so-called granuloma of the cornea or of the sclerocorneal margin is not akin to this granuloma that has been described as affecting the skin of the lids and the skin of various parts of the body All who have dealt with granuloma of the cornea know that there is a marked tendency to recur Some years ago I had opportunity to examine microscopically and bacteriologically two cases of sclerocorneal tumor In one case operation had been performed twice, recurrence had taken place, and the eye was enucleated on the third recurrence On examining that eye I found masses of staphylococci in the blood vessels and in the tissues at the base of the tumor The tumor did not transcend into the true tissues of the cornea, and it occurred to me that the exciting cause of the tumor was the micro-organism So in the next case that presented itself to me I excised deeply and cauterized the surface of the granuloma and succeeded in preventing a subsequent recurrence On examining that tumor I found the same condition It was a puzzle to me The description of this growth beginning in the lid or in the skin makes it apparent to me that in all probability the so-called granuloma occurring on the cornea and limbus is of the same nature

Dr. Harold Gifford, Omaha I saw one case of this affection a number of years ago which took a somewhat unusual course, in that the lid perforated entirely This fungoid mass perforated first the outside and then the inner side and left quite a large hole through the center of the left upper lid This was in a young woman who had a peculiar skin eruption which suggested secondary syphilis, and she came from a region just having smallpox We never could tell just what she had Whether it had any connection with the main cause I do not know At that time we did not know about granuloma pyogenicum I indexed this as a case of botryomycosis, which was the name under which it went at first The patient made a perfect recovery We simply cut out the hole and sewed up the lid Since reading of Dr Wescott's case it has occurred to me that any one reading this description might take cases of sporotrichosis for pyogenic granuloma, because in sporotrichosis there is sometimes a fungating mass covered with a coating of thin skin, and the description sounds quite similar The course would probably be different, and so far as I know the staphylococcus has not been noticed, but I think it might be well to keep this possible mistake in mind

Dr Edward Jackson, Denver I should like to mention a case which has taken a new significance for me from Dr Weeks' remarks—a case I saw two months ago, in which the structure is clearly that of granuloma, but which was not stained and examined for the presence of micro-organisms It was at the margin of the cornea Two things which I have never seen before struck me in the clinical appearance of this little swelling One was the markedly purplish red surface, and the other an edge that reminded me of the edge of an epithelioma but was perfectly soft, consisting of almost normal conjunctiva, an appearance recalled by the collar around the neck of the granuloma as spoken of The structure, as far as histologic examination could determine, was clearly similar to the class of tumors under discussion The history of this, of about six or eight weeks' standing, would place it as a comparatively early tumor of the sort

Dr C D Wescott, Chicago I have seen only one or two cases of sporotrichosis, and these I could easily differentiate after seeing this case and reading the description of the other cases The rising of the tumor through a collar of skin is characteristic, and is described by every one who has seen the tumor

Therapeutics

HEMORRHAGIC CONDITIONS

(Concluded from page 1925)

Transfusion of Blood—(Concluded)

INDICATIONS

As technic improves and experience increases in transfusions, more and more indications for its use are being found It is no longer used only as a last resort for life-saving purposes It is finding its field of usefulness extended to diseases in which an influx of some new blood might hasten the progress toward improvement or diseases in which it will tide the patient over a temporary relapse In reviewing the results of 212 blood transfusions in 189 cases, Ottenberg and Libman[10] mention a large number of varied conditions in which transfusion was tried They also discuss the results obtained in each condition Their classification is as follows

I Transfusions for simple hemorrhage.
    1 Gastric and duodenal ulcer
    2 Dysentery
    3 Typhoid hemorrhage
    4 Ectopic pregnancy
II Transfusions in connection with surgical operations
    1 Preliminary to operation
    2 For postoperative hemorrhage
    3 For shock
III Transfusions for the cure of hemorrhagic conditions
    1 Purpura hemorrhagica
    2 Hemophilia
    3 Hemorrhages secondary to
        (*a*) Blood diseases
        (*b*) Severe infections
        (*c*) Jaundice (cholemia)
IV Transfusions for blood diseases
    1 Pernicious anemia
    2 Leukemia
V Transfusions for infections
    1 Infections with pyogenic organisms
    2 Subacute streptococcus endocarditis
VI Transfusions for intoxications
    1 Acute poisoning
    2 Diabetic coma
VII Transfusions for debilitated conditions
    1 Cancer
    2 Malnutrition
    3 Simple anemia

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[10] Ottenberg and Libman Am Jour Med Sc, 1915 cl 36

The experience of Ottenberg and Libman in the foregoing cases was as follows

In duodenal or gastric ulcer the hemorrhage was stopped in twelve of fourteen cases in which the conditions were desperate The cases best adapted are those in which there has been repeated or prolonged bleeding In acutely bleeding cases there is danger of increasing the hemorrhage through increase in blood pressure

The dysentery cases were not so successful as to their final outcome In four of six cases transfused, the patients died from a continuation of the dysentery

In typhoid fever, in which nine transfusions had been performed in seven cases, two of the patients ultimately recovered They state that "in all typhoid cases, the first appearance of blood in the stools should be an indication to make preparations so that transfusion can be done, if needed, at very short notice"

In bleeding in ectopic pregnancy, transfusion was life-saving in all of three cases transfused

In transfusions done in connection with surgical operations, in thirty-three preoperative transfusions, thirteen patients recovered from the operation Some of the others died from postoperative complications They had three brilliant recoveries in five transfusions for postoperative hemorrhage In shock, however, transfusion was disappointing

With the hemorrhagic conditions, in nine cases of purpura hemorrhagica, six patients recovered completely In hemophilia, in five out of six cases the hemorrhage ceased and the patients regained good health In hemorrhage secondary to infection, in one, a case of a new-born, the hemorrhages were checked In another with gonorrheal rheumatism, transfusion was followed by recovery, while in a third case of hemorrhagic diphtheria, the patient died

In three cases of acute leukemia, the hemorrhages did not cease after transfusion, whereas in one chronic case it did

Transfusions for hemorrhage in jaundice have been very disappointing, the hemorrhage persisting afterward, even in the nonmalignant cases

The experience of Ottenberg and Libman with transfusions in pernicious anemia consisted of thirty-five transfusions in twenty-five cases In no case was there a cure, in eleven cases no effect was observed, whereas in fourteen cases immediately following the transfusion, there were more or less prolonged remissions They quote one case in which splenectomy was also done after the third transfusion, with a brilliant result, the patient returning to excellent health In their summary they state that although transfusion never cures pernicious anemia, nevertheless it is the best remedy, for it leads to remissions in about half the cases

In leukemia, the transfusion was performed in ten cases In the acute cases, the patients did not fare well, whereas in the chronic cases of the lymphatic type there was a tendency for the blood picture to return to normal This, however, was only temporary, as the leukemic blood picture ultimately returned

Transfusions were also done in infectious diseases It was done only as a last resort in some of the very desperate cases There were ten cases, and four of these patients recovered Three of these successful cases were osteomyelitic infections due to *Staphylococcus aureus* The fourth case was a streptococcic infection

In endocarditis, transfusing was resorted to to combat the anemia There were four cases, all due to the *Streptococcus viridans* In three of these cases there was temporary improvement, but all four patients succumbed to the disease

Transfusion is of value in cases of poisoning due to carbon monoxid, hydrocyanic acid, benzene or nitrobenzene when the blood has been acted on by these to a marked degree Preliminary phlebotomy, however, is very essential

Diabetic coma offers a poor field for transfusion In four cases in which transfusion was performed, not one patient recovered

In debilitated conditions caused by cancer, transfusion without surgical interference is of no avail On the other hand, it may relieve the anemia in tuberculosis In the simple anemias due to malnutrition or other minor causes, transfusion is justified, and satisfactory results can be obtained

In a series of fifteen cases of hemorrhagic disease of the new-born, Lespinasse[11] transfused by the direct method, and obtained recoveries in thirteen

In 1911, Cole[12] transfused twenty cases of pellagra, with recoveries in 60 per cent This is in marked contrast with from 10 to 20 per cent recoveries obtained by other therapeutic means

Bernheim[13] performed transfusion in a case of pemphigus and one of psoriasis, both, however, intractable to other measures There was temporary relief in both, but no permanent relief He also suggests the possibility of its use in temporarily anemic cases, in cases of chronic infection with consequent debility, or in cases of lowered resistance in which an infusion of good red blood would seem to be the only thing needed

Lewisohn,[14] in children, using the citrate method described by him, obtained excellent results in four hemorrhagic cases, one case with extensive burns, and in two cases with severe anemia

In a review of the most recent literature on the subject of transfusions, several facts stand out very impressively These are the ease and safety of transfusions, the large number of varied conditions that are either cured or much improved by transfusion, and the large field of usefulness that lies open to those who are doing transfusion work

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[11] Lespinasse V D The Treatment of Hemorrhagic Disease of the New Born by Direct Transfusion of Blood, THE JOURNAL A M A. June 13 1914 p 1866

[12] Cole H P Transfusion in Pellagra THE JOURNAL A. M A. Feb 25 1911 p 584

[13] Bernheim B M Therapeutic Possibilities of Transfusion THE JOURNAL A M A July 26 1913 p 268

[14] Lewisohn Am Jour Med Sc. 1915 cl, 886

Brewers Forbid Methyl Alcohol in Varnish—From time to time isolated instances of wood alcohol poisoning have occurred among men employed in varnishing the interior of vats in breweries which stimulated the New York health department to eradicate the use of wood alcohol for the purpose of varnishing vats in breweries Accordingly the commissioner of health addressed a letter to all breweries with offices in New York asking their cooperation in prohibiting the use of wood alcohol in their respective plants At the recent meeting of the Brewers Board of Trade, resolutions were adopted prohibiting the use of methyl alcohol in their plants for varnishing purposes to which thirty-seven New York and nine New Jersey breweries have pledged themselves This action is significant as showing the superiority of the newer method of public health administration which makes effective use of persuasion rather than of legal compulsion

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SATURDAY, JUNE 24, 1916

ANNOUNCEMENT

Owing to the amount of space occupied in this issue of The Journal by the index and the proceedings of the Annual Session, certain departments are abbreviated and others omitted

DISEASE DANGERS OF WAR WITH MEXICO

Two years ago The Journal[1] discussed the sanitary problems which must be met if our troops should have to go into Mexico for any length of time Today these problems should be considered again The state militia is mobilizing, large bodies of men are already being concentrated in camps and soon perhaps some will be moving to the Mexican border, if not into Mexico The guarding of the border is likely to be the duty which will fall particularly to the militia and less trained troops Actual invasion, if it should come, will no doubt devolve on the regular army

Typhoid and smallpox vaccination have practically removed the menace to life from these diseases under military conditions The militia, however, has not been immunized against typhoid even approximately to the extent that the regular army has been vaccinated The danger from dysentery, which is still a menace to men in army camps, has been materially lessened through improvements in the preservation and protection of foodstuffs and through increased facilities for the transportation of supplies Amebic dysentery may be prevented by strict supervision of water supply and filth disposal The use of emetin in the treatment of this condition will aid in rapidly eradicating such cases as may occur Malaria and yellow fever, conquered through eradication of the mosquito and prevention of mosquito bites, are no longer to be feared Cholera, preventable by cleanliness, and typhus fever, the scourge of Mexico, also have been studied, and their prevention can be accomplished by the enforcement of adequate sanitary regulations

The sanitation of camps has developed into a science In the development of this science American investigators — many of them officers of the medical corps of the United States Army and of the Public Health Service — have led the way, and they may be depended on to carry out these measures to the fullest extent Typhus fever is particularly a Mexican problem It has been a factor in the present European war, and the measures instituted abroad show how completely this disease may be controlled Much has been said in connection with the European war of gas gangrene, tetanus and secondary wound infection The frequency of these infections has been attributed to the cultivation of the soil in the region in which the war is being conducted If this be the cause, this condition is certainly not to be feared in Mexico Much of the warfare in Europe has been trench warfare, and diseases peculiar to this method of warfare have frequently been discussed The problem in Mexico would appear to be a different one In any event, it hardly seems likely that the old saying that "disease kills more men than bullets" will hold true

We can be sure that American medical officers of every branch of the service will do all that is humanly possible to protect our soldiers in the field As a result of their service, the American soldier will be safeguarded so that the maximum number of efficient fighting units will be continually available to those concerned with the action of troops at the front

TRENCH NEPHRITIS

Special vocations have long been associated with the occurrence of forms of disease directly attributable to the occupations involved With the changes in the modes of life or kinds of work which they require and with the evolutions of new branches of industry and new forms of activity, the incidence and character of occupational diseases likewise may change New conditions of employment and unusual demands on the physiologic mechanism may create unique dangers, increased bodily strains or unexpected risks The professional neuroses have long been recognized under a variety of more popular names, such as writer's cramp, violinist's wrist, milker's cramp, tennis elbow, baseball pitcher's glass arm and dancer's cramp These consist for the most part of tonic contractions, with or without pain, intermingled at times with clonic shocks or tremors Practically every occupation has its neurosis Another group of occupational maladies is represented in miner's disease, in painter's colic, and analogous incidents of environmental dangers Not long ago the development of the new vocation of aviation called forth the report of a special disorder, mal des aviateurs, or aviator's disease, associated with aerial flights Trench foot is a modern expression

The practices and necessities in times of war likewise call forth innovations, not only in the character of the wounds received and the surgical aspects of the com bat but also in the domain of internal medicine Very striking in this respect are the reports, now published in some detail, of what has been termed trench nephritis for want of a more expressive name[1] Acute nephritis is not sufficiently common in civil practice among men of military age to attract special attention Among the older men, persons over 30 years of age, who have found their way into the troops engaged in warfare, there are undoubtedly cases of ordinary chronic renal disease in which the lesion was not very marked It is quite probable that under the stress of the campaign the disease may progress quite rapidly in such cases, or an acute nephritis may in some instances be engrafted on the underlying chronic defect In other cases, serious chronic renal disease of long standing may be present, but have failed of recognition earlier because of the absence of urgent symptoms prior to the onset of the subsequent uremia Aside from all of these recognized possibilities, however, there have been discovered among the invalided troops a large number of cases of nephritis of a type and incidence sufficiently unexpected to command serious attention Two prominent symptoms early attracted notice, the occurrence of edema and the presence of dyspnea, the onset of these manifestations often being quite sudden Dyspnea is not usually regarded as a common feature of acute nephritis apart from uremia or cardiac failure Possibly an outpouring of fluid into the lungs and pleural cavity may have been responsible for the shortness of breath Epileptiform seizures of the uremic type were sometimes observed, but did not present an invariable feature In defining the peculiarities which justify the designation of the cases as forms of a distinct nephritis, Sir John Rose Bradford has epitomized them as rapid subsidence of well marked renal dropsy, frequent presence of bronchitis and dyspnea, severity and suddenness of onset of uremic manifestations, such as epileptiform seizures, rarity of occurrence of inflammatory complications, and an extraordinarily low mortality With this the other observers, notably Capt Langdon Brown, are in substantial accord Most of them emphasize the ultimately favorable prognosis in the majority of instances In the larger number of the cases there has been no evidence either in the physical signs or in the patient's history to suggest the presence of a latent renal lesion The rapid subsidence of the severer symptoms and the disappearance of complications are not consonant with the existence of an acute nephritis complicating a chronic lesion of the kidney

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[1] Disease Dangers of Mexican Invasion, editorial, The Journal A M A, May 2, 1914, p 1403

Trench nephritis affects men of all ages A large number of cases occur in quite young men, over 70 per cent out of 571 cases have been recorded in men under 35 years of age The malady has by no means been limited to those actually serving in the trenches Orderlies and others whose duties keep them at the base operations have succumbed Only about 1 per cent of the cases have occurred among officers, and these were not limited to any age The disease has apparently not been limited to the British troops in Flanders The German and Austrian armies also have been affected in the present war Sir William Osler has stated that there can be no doubt that this epidemic acute nephritis is a disease not heretofore described except as occurring in our own Civil War Langdon Brown is responsible for the statement that in the American campaigns over 14,000 cases were recorded He recalls that in the American Civil War the military conditions resembled those of the present European conflict in some important particulars There was the sudden dash of the Confederates northward, which was checked and followed by prolonged trench warfare

The most natural tendency in explanation of the newly described disease is to attribute it to exposure All of the close observers of the cases are, however, unwilling to accept this hasty conclusion It is pointed out that the nephritis was absent among the Indian troops, although they suffered in common with the British at the front from other maladies — frostbite, bronchitis, pleurisy, pneumonia—commonly attributed to exposure Furthermore, the number of cases of acute nephritis was very small until the spring of 1915 The disease did not attain epidemic proportions until after the days of severe exposure had been passed The number of cases increased as the summer came on

The facts at present available indicate that so-called trench nephritis or epidemic acute nephritis, a condition not frequently seen in civil life, is not merely accidental, but represents one with similar symptoms distributed over a large area and suggests that there is some common pathogenic factor responsible The possible origin of the disease as the result of etiologic agents familiar in ordinary practice has been considered by Wallis He believes that intestinal toxemias and mineral poisons, for example, can be excluded Dysentery and typhoid fever have been suggested as causes, but there is a lack of agreement between the curves of incidence of the intestinal and renal disturbances Alcoholism cannot be charged with complicity in this campaign, nor can such extensive outbreaks be attributed to intentional drugging by soldiers to render themselves unfit for service The claim that the antityphoid inoculation is responsible is not consistent with the rarity of nephritis among inoculated troops training at home

The simplest explanation of a common cause, not operative in all wars or in all places, and susceptible of variation apart from the clemency or inclemency of seasons and regions, would be a specific infection This is at present the most popular interpretation among the British observers This explains the designation "epidemic infectious nephritis," which has been received with favor It helps to explain the slow and gradual rise of the epidemic, which may easily thus be associated with the multiplication and spread of some causal organism Quite possibly this acts on the kidneys of patients who are particularly susceptible Here cold and exposure may play some contributory part The disease has not yet been experimentally transmitted to animals As a problem of grave importance and unusual scientific interest, it has reached a stage at which symptomatology and statistics must be supplemented by epidemiologic and etiologic investigations

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[1] Bradford J R Nephritis in the British Troops in Flanders Quart Jour Med 1916 ix 125 Brown W L. Osler W Andrewes F W Mackenzie Wallis R. L. and Abercrombie R. G Discussion on Trench Nephritis Proc. Roy Soc. Med. March 1916 Nephritis Among the British Troops in Flanders editorial The Journal A. M A. March 11 1916 p 819

DIABETES IN JAPAN

An unusual incidence of certain diseases has frequently been attributed in the past to an increased susceptibility or relative immunity, as the case might be, of certain races to the abnormal condition under consideration As instances, the alleged relative susceptibility of Melanesians to measles, of negroes to tuberculosis, of Malaysians and other oriental races to beriberi, and of those of European descent to yellow fever may be cited Some of these supposed correlations have been shown to be due to the inadequacy of statistics or the imperfections and shortcomings of diagnosis obtaining among the less civilized races in the past In other instances the supposed racial peculiarities of disease have been connected with the peculiar dietary habits of certain peoples or some peculiarly enhanced possibility of infection due to modes of living or geographic conditions In other words, the apparent interrelation between frequency of disease and races of people has doubtless often been due to enforced external or environmental factors rather than to actually inherited racial characteristics

Diabetes is one of the diseases for which an unlike susceptibility has been charged to different races Careful statistics are showing, according to the interpretation of Futcher, that the statement that diabetes is very uncommon in the colored race does not seem to be borne out by the facts In India, where the disease is reported to be common among the educated and commercial classes, it is said to be the Hindoos chiefly who suffer Diabetes has long been regarded as an uncommon malady in China and Japan The disease has even been regarded as somewhat different in character in Japan from the manifestations seen in America and Europe It is only in recent times, however, that useful statistics obtained in accord with the dictates of modern medical science have become available for some of the communities of the Far East A recent contribution by Iwai[1] of Tokyo furnishes some highly interesting facts in relation to diabetic disease in Japan Thus it is said to be uncommon either in hospital or in private practice to encounter diabetic patients presenting the classic symptoms of the disease polydipsia, polyphagia, polyuria and emaciation Consequently diabetes is rarely discovered except through the chance examination occasioned by some other simultaneous disorder The fact that augmentation of the volume of urinary secretion is almost never observed presumably explains why the incipient cases have not been detected in the past in Japan, and it likewise suggests the relatively mild type of the perversion Ketonuria is stated to be correspondingly uncommon as a symptom in those affected

As an indication of the relatively benign character of diabetes in Japan, Iwai states that without examination of the urine for sugar it would as a rule not be detected, and a reduction of the carbohydrate intake suffices ordinarily to make the glycosuria disappear The progressive increase in severity which is so familiar and difficult to combat is likewise not typical of the disease heretofore observed in Japan This malady is only infrequently a direct cause of death Out of 5,387 necropsies made in fourteen years at the University of Tokyo, only twelve cases of diabetes were reported, and death in these instances was due to complications,-most frequently to pulmonary tuberculosis and chronic nephritis

How is this infrequency and peculiarly mild type of diabetes among the Japanese to be accounted for? It can scarcely be associated with any natural restriction of carbohydrate in the diet On the contrary, the Japanese, as a nation are accustomed to consume a ration unusually liberal in carbohydrate, particularly in the form of rice As a rule they eat somewhat less of the flesh foods According to observations of Iwai, the Japanese usually exhibit a high tolerance to carbohydrate, as evidenced by the capacity to assimilate large doses of sugar without provoking an alimentary glycosuria Pending a better solution of the question raised by these interesting facts, it may be permissible to ascribe the relative immunity of the Japanese from diabetes, especially of the severer types, to racial characteristics which cannot as yet be more scientifically defined

Social Causes of Insanity—If certain occupations predispose to particular intoxications, if others facilitate special infections, or expose those concerned to intemperance, to overwork, or to insomnia, this does not alter in the slightest degree the biologic value of the intoxication, of the infection, of the overwork, as the cause of the insanity Social position, conditions of misery or affluence, the professions, business occupations, tend only to provide a predisposing environment, by reason of which certain individuals are more exposed to one group of causes than to others This is of the greatest importance from the sociologic point of view, and especially in regard to the question of prophylaxis, but it has nothing to do with the pathogenetic mechanism —Lugaro, Modern Problems in Psychiatry

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[1] Iwai, T Le diabete sucre, "tonyo byo" chez les japonais et son etude comparative avec le *diabete observe en* Europe et en Amerique, Etude clinique et *experimentale*, Arch de med expér et d'anat path, 1916,, xxvii, 1

Current Comment

THE PRESIDENT-ELECT

For the first time the presidency of the American Medical Association has been bestowed on the brother of a former president. So well known is the name of Mayo that it may seem unnecessary to present a biography of the President-Elect. The work that the Mayo brothers have done, the institution they have established at Rochester, Minn., are known throughout the country. Dr. Charles Horace Mayo was born in Rochester, Minn., July 19, 1865, the son of the late Dr. William Worrall Mayo and Louise Abigail Wright Mayo. He graduated from the Chicago Medical College in 1888, and at once began practice with his father and his elder brother, Dr. William J. Mayo, who was President of the American Medical Association in 1906. At that time St. Mary's Hospital in Rochester — which was the start of what has become known as the Mayo Clinic — had thirty patients. He was president of the Western Surgical Association in 1904, of the Minnesota State Medical Association in 1905, chairman of the Section on Surgery of the American Medical Association in 1907, and of the Surgical Section of the International Congress on Tuberculosis in 1908. The honorary degree of M.A. was conferred on him at the Northwestern University in 1902, and the degree of LL.D. at the University of Maryland in 1909.

President-Elect Charles Horace Mayo

A NEW DECISION UNDER THE HARRISON ACT

An important decision[1] interpreting the Harrison Narcotic Law was handed down by Mr. Justice Holmes of the United States Supreme Court last week. A Chinese doctor had issued to an alleged addict a written prescription for 1 dram of morphin sulphate. The addict was not registered with the collector of internal revenue of the district, and had not paid the special tax required of those who register under the act. The government argued that possession by the addict of this amount of opium came under Section 8 of the Harrison act, which declares it unlawful for "any person" (with certain specified exemptions) who is not registered and has not paid the special tax to have in his possession or control any of the drugs to which the act applies, "such possession or control" being held presumptive evidence of a violation of the act. The indictment charged the defendant physician with conspiring with the addict to place the drug in his possession. It was further alleged that the defendant physician did not issue his prescription in good faith for medicinal purposes, but for the purpose of supplying a morphin addict. The indictment was quashed by the district judge on the ground that the act was a revenue act, and that the words "any person" must be confined to the class of persons with whom the act previously had been purporting to deal. The contention of the government, on the other hand, was that the act was one of several passed in order to carry out the International Opium Convention, that, under the guise of a taxing measure, given to afford it "a coating of constitutionality," it really was a police measure that strained all the powers of Congress. The case came before the Supreme Court from the United States District Court for western Pennsylvania. The court in its decision stated that a statute must be construed, if fairly possible, so as to avoid not only the conclusion that it is unconstitutional, but also grave doubts on that score. On the hypothesis that opium is produced in the United States (which is assumed by Congress in the act itself), an attempt by Congress to make possession of opium a crime would raise a grave question of constitutionality. "Only words from which there is no escape could warrant the conclusion" that Congress meant to strain its powers almost to the breaking point to make the possession of opium a crime Hence the Supreme Court, concluding that the measure is to be treated as a revenue measure, and that "any persons" refers to the persons required to be registered, affirms the decision of the lower court We have gone thus far into the legal aspects of the case because of the importance of its bearings It appears that, while certain classes of persons (including physicians) are amenable under the law for their dealings in narcotics, those classes of persons who are not named in the act are not accountable under it for the mere possession of such drugs This decision, which places the more responsible classes of persons under the purview of the law, and exempts the irresponsible, is bound to create, at first, a certain amount of misunderstanding and resentment Sober reflection however, will remind us that the occasional occurrence of such anomalies is inevitable under our constitutionally limited federal government In passing the Harrison act as a revenue measure, Congress has apparently done all that it could do toward placing the traffic in narcotics under control, and the courts, in interpreting the act as a revenue measure, are merely keeping it under the shelter of the constitution Further police measures, if desired, must be enacted by the several state legislatures It is worthy of note that the decision of the Supreme Court was not unanimous, Mr Justice Hughes and Mr Justice Pitney dissented

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[1] The United States, Plaintiff in Error, vs. Jin Fuey Moy. In Error to the District Court of the United States for the Western District of Pennsylvania.

THE DETROIT MEETING

The Detroit session of the American Medical Association was most successful, both in attendance and in scientific work The attendance — 4,586 — marks the third largest meeting, the largest — 6,466 — being the Chicago meeting in 1908, and the second — 4,722 — the Boston meeting, held in 1906 Although the attendance was large, every one was provided with comfortable quarters because the local profession, influenced no doubt by the prevailing spirit of "preparedness," had made ample arrangements for those who could not be accommodated in the leading hotels All the sections report unusually good attendance, excellent papers, and instructive and practical discussions Detroit was generous in supplying automobiles for the transportation of physicians in attendance most of the automobile manufacturers supplied cars and the local profession as well as the citizens of Detroit gave the use of their cars freely In spite of the fact that the meeting places were scattered, physicians had no difficulty in going from one meeting to another The local Committee on Arrangements is to be congratulated on its management every detail had been considered and nothing was lacking to make things run smoothly The entertainments were lavish, and the social functions most delightful In a word, the meeting was a success in every way The medical profession of Detroit and of Michigan is to be commended not only for its generous hospitality but for the constant courtesy accorded to those who attended the meeting In these efforts the medical profession was heartily supported by the people of Detroit

AN EPOCH-MAKING SESSION

The Detroit session promises to be the most epoch-making of any since 1901 for two reasons First, and more important, was the creation of the office of Chairman of the House of Delegates This will relieve the President of the Association of the task of presiding over the House of Delegates The president is usually elected on account of his scientific attainments, and not because of his ability to preside over a deliberative body This new order of things will be a great relief to the President, and will give him time to attend to and participate in the functions which naturally appeal to the presiding officer of a great scientific body such as the Scientific Assembly has become On the other hand, the House of Delegates will be presided over by a man selected because of his knowledge of the activities of the Association, of the procedure of the House of Delegates, and on account of his ability as a presiding officer The House selected as its first Chairman, Dr Hubert Work of Pueblo, who for many years was a member of the House and who is thoroughly conversant with its procedures The second epoch-making change is that which provides that the opening meeting of the Scientific Assembly — the General Meeting — shall be held on Tuesday evening, the scientific sections to convene on Wednesday morning instead of on Tuesday afternoon as heretofore The main object of this change is to give the House of Delegates two days for its deliberations before the opening of the Scientific Assembly It is unnecessary to dilate on the importance of this change so far as the House of Delegates is concerned, many men have hesitated to serve as members of the House because that work has prevented them from attending the sections Under the new order of things the great probability is that the House of Delegates will complete its work on Tuesday, except for the election of officers, and business incidental to its closing meeting The change will also be of decided advantage to the Scientific Assembly Heretofore the Scientific Assembly commenced Tuesday morning, the first half day being taken up with the opening general meeting Hereafter the opening exercises will take place on Tuesday evening, and the scientific sections will begin their programs on Wednesday, continuing through Thursday and Friday, meeting both morning and afternoon

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Philadelphia County's Burden for Dependent Children Increased—An investigation into the causes of juvenile dependency undertaken by the committee representing allied organizations for child welfare in Philadelphia has directed attention to the startling growth in the financial burden of the County of Philadelphia for the maintenance of children of indigent and delinquent parents which has increased from $4,599 02 in 1909, to $290,924 07 in 1915 The result of the investigation showed that the county is being defrauded by parents who got rid of children from sheer avarice and that several institutions are receiving money for the support of children long past the age of dependency, that certain charitable organizations engaged in farming out dependent children to families in country districts are receiving money for the support of children who had returned to the care of their parents Within a week following the establishing of the bureau of children's agents and investigators the officers of various charitable organizations voluntarily asked the municipal court for the discontinuance of more than [illegible] orders for the support of children placed in their care

Medical News

(Physicians will confer a favor by sending for this department items of news of more or less general interest such as relate to society activities, new hospitals education, public health etc)

ILLINOIS

Sanitary Survey—The sanitary survey of Champaign-Urbana will begin, July 1, under the charge of the state board of health working in cooperation with Dr William E Schowengerdt, Champaign

Sanatorium Opened—The formal dedicatory exercises of the Rockford Memorial Sanatorium for Tuberculosis were held, June 10, when Dr Daniel Lichty, president of the board of trustees of the institution tendered the property to the city, and Mayor W W Bennett accepted the institution on behalf of the city Dr George W Webster, Chicago, formerly president of the state board of health, delivered the principal address

Successful Four-Day Campaign.—The campaign undertaken in Highland Park to raise funds for the erection of a hospital culminated, June 12, at a mass meeting held at the Deerfield High School at which it was announced that instead of $100,000 the amount required, $167,000 had been subscribed by men and women of the north shore for this hospital which is to be nonsectarian, and is to be used by residents of Highland Park, Deerfield, Highwood and Ravinia

Chicago

Jackson Park Sanitarium Opened—The Jackson Park Sanitarium for sick babies at LaRabida opened for the season, June 12

Fund for Tuberculous Children Sought.—Thus far $2,500 has been obtained of the $3,000 required to send 250 tuberculous children from the stockyards district to Camp Harlowarden, near Joliet, where they will be cared for from June 26 until September 2 Donations will be received by Mr George M Benedict, Drovers National Bank, treasurer of the organization

Personal—Dr John B Murphy has been made knight commander of the Order of St Gregory the Great by Pope Benedict XV The collar and golden octagonal cross of the order were conferred on him by Archbishop Mundelein at the exercises attending the formal opening of the new addition to Mercy Hospital, June 15 Chancellor E F Hoban read the papal brief and the Archbishop invested Dr Murphy with the collar and cross of the order——Dr Felix Kalacinski has been appointed a member of the state board of health, vice Dr Adam Szwajkart, resigned, on his appointment as county physician of Cook County

Sanatorium Committee to be Permanent.—The committee of one hundred created, March 31 for the benefit of the Municipal Tuberculosis Sanatorium met, June 16, and adopted an aggressively constructed program of action Mr E A. Bancroft presided and Dr Frank Billings, chairman of the executive committee, reported on the need of a permanent organization to discover and interpret facts and to help embody them in programs of action Mr Frank E Wing formerly business director of the sanatorium, was appointed executive officer of the committee of one hundred, and instructed to open offices in the loop district

State University Medical School News—Work on the first unit of the new University of Illinois Medical School plant is to be started immediately with the erection of an eight-story clinical building to cost $250 000 This building will provide a dispensary, operating rooms a floor for medical cases one for surgical cases and one for obstetric cases——The opening exercises of the Graduate School of Medical Science of the University of Illinois were held at the College of Medicine, June 20 After introductory remarks by President Edmund Janes James of the University of Illinois, Dr Frank Billings delivered an address on 'The Relation of Graduate Work in the Fundamental Sciences to Clinical Study ' Announcement of the lectures for the graduate course quarter, which extends from June 20 to September 12, are to be made by weekly bulletins and all interested in graduate work are invited to attend

Chicago Pledges Four Base Hospitals—Mr A A. Sprague II chairman of the Chicago Chapter, Col Jefferson R Kean M C., U S Army, director general of military relief, and John J O'Connor, director of the Central Division, American Red Cross, held a conference June 19, which resulted in the pledging by Mr Sprague, for the chapter, of four base hospitals for Chicago, each containing 500 beds at a total cost of about $160,000 These hospitals, each with its attendant field columns, to be used in transporting patients from field hospitals to evacuation and base hospitals, will immediately be established and fully equipped Contributions toward the establishment of the hospitals will be received by Mr Orson Smith, treasurer of the local Red Cross chapter At a later conference between Colonel Kean and Chicago members of the National Committee on Medical Red Cross service, including Drs Frank Billings, John B Murphy, Albert J Ochsner, Arthur Dean Bevan, and Franklin H Martin, the personnel of the hospital units and field columns was discussed Each base hospital will consist of 196 persons, including a director, staff surgeons, nurses, nurses' aids, orderlies and cooks The four hospital units suggested are first, the combination of Wesley and Mercy hospitals under the charge of Dr John B Murphy, second, St Luke's and Michael Reese hospitals in charge of Dr Lewis L. McArthur, third, St Joseph's, Augustana and St. Mary of Nazareth hospitals, under the control of Dr Albert J Ochsner, and fourth, Presbyterian Hospital in charge of Dr Frank Billings

INDIANA

Sanitary Inspection of Summer Resorts—The state board of health has made sanitary inspection of all the summer resorts of Indiana, and has requested that employees of hotels and all who have to handle food be compelled to undergo an examination to determine if they are suffering from any infectious disease

Fresh Air School Closes—The Fresh Air School, Indianapolis which has been in operation for two years, has closed its annual session with an attendance of fifty pupils, with an average gain of 8 18 pounds per pupil The school is conducted under the supervision of the Marion County Society for the Prevention of Tuberculosis

Personal—Dr James H Taylor has been elected president of the Indianapolis Board of Trade——Dr Melville F Johnston has been unanimously reelected a member of the Richmond school board——Dr Samuel E Smith, superintendent of the Southeastern Hospital for the Insane, Richmond has been elected alumni trustee of the University of Indiana

MARYLAND

Personal.—Dr Edward L Whitney of the staff of the University of Maryland and formerly associated with the Baltimore Medical College before its absorption into the University of Maryland, has entered into private practice in Portland, Ore——Dr Thomas A. Ashby, who has been ill at his home in Baltimore for several weeks, is reported to be improving

Staff Society Formed—At a recent meeting of the Mercy Hospital staff, Baltimore, a society was formed to conduct scientific meetings and to meet monthly The papers read and the cases presented are to be given by members of the house staff while the visiting staff will open the discussions All former residents of the hospital have been elected alumni members, and the visiting staff were elected honorary members of the society The following officers were elected chairman, Dr Erwin E Mayer vice chairman, Dr Richard O'B Shea, and secretary, Dr Thomas K Galvin

Hygiene School for Johns Hopkins University—The Rockefeller Foundation will establish its School of Hygiene and Public Health in connection with the Johns Hopkins University, and Dr William H Welch will be the director of the school, with Dr William H Howell as head of the physiologic division It is expected that the school will be opened in October, 1917, as it is estimated that a year will be required for the planning, construction, and equipment of the building and the gathering together of the staff of teachers The necessary funds for construction, equipment, maintenance and expenses of the school will be provided by the Rockefeller Foundation The school, while working in cooperation with the medical school as well as with the school of engineering will have an independent existence. Opportunities in each will be available to students in the other schools The central and principal feature of the school will be an institute of hygiene housed in its own building, provided with the requisite laboratories and facilities and with its own staff of teachers giving their entire time to the work of teaching and investigating There will be laboratories of sanitary chemistry, of physiology as applied to hygiene, of bacteriology, and protozoology, and provision for epidemiology, industrial hygiene, vital statistics, a museum, library, etc Additional *facilities for instruction and research* will be supplied by the medical and the engineering schools, the hospital, especially the newly opened wards for infectious diseases, and other departments of the university, which will be aided in undertaking the new work It is anticipated that mutually helpful relations will be established with the municipal and state departments of health, and with the federal public health service, whereby opportunity will be afforded for field service and other practical experience in various branches of public health work Especially advantageous will be the relations with the International Health Commission of the Rockefeller Foundation, which is engaged in the study of hookworm, malaria, yellow fever and other tropical diseases, which will receive due attention in the work of the institute

MASSACHUSETTS

Essex North District Society Doings—At the annual meeting of the Essex North District Medical Society, May 5, it was voted that "the society instruct its councilors to urge the council of the Massachusetts Medical Society to use every legitimate means and procure an amendment to the Workmen's Compensation Act which will give the insured freedom of choice of medical attendance" Some of the insurance companies who carry all employer's risks are insisting that certain contract physicians only be allowed to treat the patients and are refusing to pay the family physicians A recent decision of the supreme court of the state so interprets the present law——The summer outing of the society was held on the grounds of the Merrimack Valley Country Club, Methuen, June 14, where a program of sports was provided, and dinner was served

NEW MEXICO

Higher Preliminary Requirements—An official communication just received from the New Mexico Board of Health and Medical Examiners states that beginning with January, 1918, the standard of preliminary education for all students matriculating in medical colleges recognized by that board will be two years of college work The requirement will apply to all those who graduate after Jan 1, 1922

NEW YORK

Alumni Election—At the annual meeting of the Alumni Association of the Medical Department of the University of Buffalo, held in Buffalo, May 31 the following officers were elected president, Dr Walter D Greene, '76, Buffalo, vice president, Dr William H Bergtold, '87, Denver, secretary, Dr Julius Richter, '04, Buffalo, treasurer, Dr Frank E Brundage, '09, Buffalo At the annual dinner, held June 1, at the Hotel Stattler, Dr John Parmenter, Geneva, presided

Health Officers' Conference—At the opening of the sixteenth annual conference of Health Officers of the State in Saratoga, June 6, Dr Hermann M Biggs, state commissioner of health, in his opening address, asserted that during the last two years notable advances have been made in combating all communicable diseases, and the death rate of infants has been reduced from 121 to 99 per thousand The rate should, however, be brought down to 65 or 70 per thousand June 7, the subject for the day was "Communicable Diseases," and on June 8, "School Hygiene"

New York City

Infantile Paralysis—June 17, announcement was made of the discovery of a group of cases of infantile paralysis in Brooklyn Up to that date, twenty-four cases had been reported, fourteen in the district lying between Henry Street and Seventh Avenue and Baltic and First streets The cases are mild in character, and so far have appeared principally in infants and very young children The department calls attention to the fact that diagnosis of suspected cases of infantile paralysis is aided greatly by an examination of cerebrospinal fluid, that such examinations are made free of charge in the laboratory of the department, and that physicians trained in the diagnosis of the disease will consult with any attending physicians on request

NORTH CAROLINA

Commemorate Health Work in Bladen County—At Elizabethtown, June 24, the first county health commencement ever held in the state was celebrated The occasion is the culmination of a three months' health campaign which has been conducted by Dr Thomas M Jordan, Raleigh, against pellagra and preventable diseases In addition to the commencement exercises there was a picnic and sports

Medical Inspection of Schoolchildren—In the May issue of *Our Communal Health*, the organ of the Consolidated Board of Health of Wilmington and New Hanover County, the medical inspection of schoolchildren during the past year is reviewed Of the 637 children examined by Dr John Thames, Wilmington, assistant health officer, there were found thirty-three cases of defective vision, four of which were corrected, seven cases of defective hearing, of which two were corrected, 160 cases of enlarged tonsils and adenoids with seventeen corrections, 281 cases of defective teeth with fifteen corrections, 134 cases of neglected and diseased scalps, of which eighty-five were corrected, twenty cases of pediculosis, all of which were corrected, and 114 cases of defective nutrition, of which eighty-six were corrected A card index was prepared covering the personal and physical condition of each child, together with such disease history as could be obtained

OHIO

Personal—Dr Frank G Boudreau, Columbus, has been elected executive secretary of the state board of health, succeeding Dr Eugene F McCampbell

Mental Hygiene Society Organized—Forty-four physicians and sociologists of Ohio met in Cleveland, May 17, and organized the Ohio Society for Mental Hygiene Mr Clifford W Beers, New York, secretary of the National Committee for Mental Hygiene, outlined the scope of the movement Dr Arthur F Shepherd, Columbus, was elected chairman and empowered to name a committee on permanent organization to meet at call of the chairman

PENNSYLVANIA

Dog Quarantine—The state health department, June 16, established a general quarantine against rabies in Delaware, Chester and Camden counties The Delaware County quarantine includes Chester and all boroughs Notice of the quarantine is being posted in all districts where rabies has been discovered The Media Council requested establishment of a quarantine because of six cases of rabies and as many dogs had been bitten

Personal—Dr James E Silliman, Erie, was elected medical director of the Pennsylvania Department of the Grand Army of the Republic at its fiftieth annual encampment held in Harrisburg, June 8——Dr Jonathan C Biddle, superintendent of the State Hospital, Fountain Springs, was the guest of honor at a meeting held at the State Hospital, June 8, on the occasion of Dr Biddle's sixty-second birthday anniversary——Dr Daniel A Webb, Scranton, who sailed for Europe early in May, arrived safely in London and expects to be transferred to duty with the Harvard unit in France

Philadelphia

Hospital Memorial Unveiled—A stone brought from the battlefield of Gettysburg bearing a bronze tablet commemorating the service of the patriotic men and women who administered to more than 20,000 wounded soldiers during the Civil War at the Satterlee General Hospital, was unveiled, June 10, with impressive ceremonies The memorial was erected by subscriptions conducted by the Forty Ninth Street Station Association, the Cedar Avenue and Chester Avenue Improvement Associations

Military Training Camp for High School Students—Dr Joseph Leidy, '87 M, has offered to place at the disposal of the board of education a tract of 40 acres of land at Penllyn for a military training camp for high school students during the summer months In his letter, Dr Leidy says in part "The lay of the land adjacent to the upper Wissahickon, with ample supply of pure drinking water, makes it an admirable location for such use The surrounding country is rich in Colonial history If the students of our public schools are to profit from the advantages of a summer camp this year, the work should be undertaken immediately, and not postponed until the season is too far advanced"

Second Ward Has Own Health Bureau—An experimental laboratory has been opened at the corner of Twelfth and Carpenter Streets, where the citizens of the Second Ward are being taught the reasons for cleanliness, the need of milk inspection, etc Medical inspectors, district doctors, visiting nurses in the employ of the city members of the board of inspectors and officers of the Bureau of Housing and Sanitation are all doing their work in the Second Ward, with the health center as their headquarters The entire ward is included in the experiment Housing conditions will be made the subject of study by the housing experts The cleanliness of the streets, and the condition of the sewage will be studied

Personal—Dr Herman A Bray delivered an address recently before the first graduating class of the Nurses' Training School of the Lebanon Hospital Philadelphia——Dr Levi J Hammond of the Methodist Episcopal Hospital delivered an address before the Lancaster City and County Medical Society June 7 on "Diseases of the Pancreas"——Dr J Stuart Rodman has been made permanent secretary to the National Board of Medical Examiners, which will hold its first examination in Washington D C., October 16——Dr Max Minor Peet, instructor in the Surgical Research Department of the University of Pennsylvania, will resign his post, July 1, to accept an appointment as instructor in surgery in the University of Michigan Ann Arbor——Dr Earl C. Peck of the Germantown Hospital has been appointed chief assistant resident physician at the Hospital for Contagious Diseases

Tribute to Dr White—Trustees of the University of Pennsylvania June 12 paid a noteworthy tribute to the late Dr J William White surgeon and author, who was a member of the board of trustees from 1911 until his death when they adopted a memorial prepared by former attorney Dr John C. Bell in which is reviewed Dr White's eminent service in behalf of the university beginning with his career as student almost fifty years ago and continuing through his life and in his will, which provides several endowments to the university activities A high mark of respect also is paid to his career in many fields as a benefactor, surgeon, author, and public citizen

TEXAS

Personal.—Dr Edward H. Cary, Dallas, president of the State Medical Association of Texas had conferred on him the honorary degree of LL.D by Baylor University, Waco, June 7——Dr Walter H Moursund Dallas, pathologist of Baylor Medical College has been appointed staff pathologist and placed in charge of the laboratory——Dr John M Neel, Dallas has been appointed county health officer, succeeding Dr Taylor C Gilbert, who has been called to San Antonio for service with the National Guard of the state

Railway Surgeons Organize—The Texas Railway Surgeons Association was organized at a meeting at San Antonio, June 1 The principal address of the session was delivered by Dr William B Collins Austin state health officer, on 'Public Health and Railway Sanitation, Proper Handling of Typhus Fever The following officers were elected president Dr Robert W Knox, Houston chief surgeon of the Sunset-Central Lines in Texas, vice president, Dr Joseph H Reuss Cuero, chief surgeon of the San Antonio and Aransas Pass Railroad and secretary-treasurer, Dr Douglas Largen, San Antonio local surgeon of the San Antonio and Aransas Pass Railroad

WISCONSIN

Typhoid Damage Suits Dropped—Five suits against the city of Milwaukee in which $50 000 damages were claimed for five deaths alleged to have been due to drinking water during the recent typhoid epidemic, were dismissed by Circuit Judge Gregory, June 1 on agreement of E. L. McIntyre first assistant city attorney, and John A. Jastroch, council for the plaintiffs

Personal.—Drs Bernard H Oberembt and John E Rueth, Milwaukee, sailed for Germany June 17, under the auspices of the American Surgeons Expeditionary Committee.——Dr H. Christian U Midelfart, Eau Claire has been unanimously elected chairman of the council in charge of the Luther Hospital campaign.——Dr Reuben J Elliott Milwaukee, past surgeon general of the United Spanish War veterans, and first assistant surgeon at the National Military Home, Milwaukee, was the principal speaker at the banquet of the organization in honor of Commander-in-Chief L. C. Dyer June 1——Dr Thomas C. Clarke Oconto has assumed charge of the Oconto County Hospital

Laboratory for Rhinelander—The state board of health has established a laboratory at Rhinelander and has placed Mr A A Sliwinski, formerly of the staff of the State Laboratory, Madison, in charge of the institution This laboratory is ready to examine sputum for bacilli, to examine swabs for diphtheria or other significant organisms, to examine pus from gonorrhea or other pyogenic infections, to examine the central nervous system of animals suspected of rabies, to examine spinal fluid for the meningococcus or other organisms, to examine specimens and suspected cases of anthrax glanders or actinomycosis, to examine feces and urine for suspected cases of typhoid carriers and in suspected cases of bacillary dysentery, to examine blood in suspected cases of typhoid and to make bacteriologic and chemical examinations of water to ascertain its potability All these examinations will be made free of charge, all that is required being that the specimens be sent prepaid, that accurate and adequate data accompany each specimen and that they be properly packed and marked.

CANADA

Hospital News—The Ontario Military Hospital, Orpington, England, has now over three hundred patients and the entire hospital of 1,040 beds will soon be filled——Mr Harold Kennedy, lumber merchant, Quebec City, who has already placed the Bromley Hotel, London, England, at the disposal of the Canadian Medical Service as a convalescent hospital, has now acquired an estate near Maidstone, England, for similar purposes The estate comprises 5,000 acres——Lieut Col Henry D Johnson, Charlottetown P E I., has been detailed for duty with the Canadian medical forces in France Maj Frederick Guest, St Thomas, Ont., succeeds him as commandant of the convalescent hospital at Buxton, which is full with over 300 Canadian soldiers suffering from rheumatism and allied complaints——The accommodation of the Canadian section of the hospital at Epsom, England, has been increased by 1,000, making the total now 2,500 beds Epsom will soon be devoted entirely to Canadian soldiers which will give 3 800 beds——Maj Irving of Toronto, who is commandant of the Dalhousie University Hospital, Halifax, N S, has embarked for France——The Victoria Hospital, Fredericton, N B is to be enlarged by a new wing This is rendered possible by a gift of the late Mr Donald Frazer of that town It will likely be completed during the present year——The Orillia General Hospital (Ont) is to be enlarged The necessary funds for the enlargement of the Essex (Ont) Tuberculosis Hospital having been provided by Mr Gordon McGregor of the Canadian Motor Company, an addition is to be added in the near future It is situated at Union-on-the Lake, Ont——The town of Ingersoll, Ont, having failed in its application to the courts for the setting aside the terms of the will of the late Dr Daniel W Carroll of that town, his residence will be converted into a Protestant Hospital for Sick Children, and will be maintained partially out of the fund of $12,000 bequeathed by Dr Carroll for the purpose——The Jeffrey Hale Hospital, Quebec City, is to open a tuberculosis ward——The legislature of British Columbia has granted $20,000 to the Vancouver General Hospital Most of this amount will go for the new surgical wing McGill University began a summer session in medicine on the first of May By attendance at this session medical students may complete their course and so be available for overseas service in the Canadian Army Medical Corps Several fifth year students recently returned from the front for this session——The Medical Department of the University of Toronto is holding a summer session from May 1 to November 30, and about sixty men are in attendance They will enlist for overseas service on graduation——Queen's University, Kingston, Ont., is holding a summer session for second third, fourth and fifth year medical students——The Faculty of Medicine, Dalhousie University, Halifax N S., has inaugurated a course of lectures on medical ethics Prof D Fraser Harris lectured on the relations of the practitioner to the patient, Prof William H Hattie lectured on the relation of the practitioner to his brother practitioners and Dr John G McDougall spoke on the relations of the practitioner to the public.——The medical students of Manitoba University who were to have been graduated in 1917 are being given a summer session and on receiving their degrees in the autumn, some will embark for overseas service.

GENERAL

States Have Adopted Army Standard—The secretary of war, in a telegram received at the Central Department, June 18 advises that all states in the department have adopted for the militia, the standard physical examination prescribed for the regular establishment

No Training Camps this Year—On account of the precarious condition of affairs on our southern border, the sanitary training camps planned at Fort Benjamin Harrison, Indianapolis, from July 5 to September 5, have been abandoned and the post will be used as a mobilization camp for the Organized Militia of Indiana Field Hospital No 1, U S Army, under command of Maj William W Reno, M C, U S Army, and Ambulance Company No 1, under command of Capt Condon C McCormack, M C, U S Army, which had been ordered to Fort Benjamin Harrison for duty during these camps, have been diverted and are waiting orders for the Southern frontier

Southern Railway Surgeons Meet—At the annual meeting of the Association of Surgeons of the Southern Railway, held in Chattanooga, June 7, the following officers were elected president, Dr Cooper Holtzclaw, Chattanooga, vice presidents, Drs William H Armstrong, Rogersville, Tenn, Thomas F Robinson, Bessemer, Ala, Julius H Taylor, Columbia, S C, and Henry McHatton, Macon, Ga, secretary-treasurer, Dr Jacob U Ray, Jr, Woodstock, Ala (reelected for the twelfth term), and member of the executive committee, Dr F R Gobbel, English, Ind The prizes offered by the official journal for the best papers during the convention were awarded to Drs Edwin T Newell, Jr, Chattanooga, Tenn, Julius H Taylor, Columbia, S C, and Martin D Delaney, Alexandria, Va Jacksonville, Fla, was selected as the next place of meeting

Examination for Naval Medical Corps—The next examination for appointment in the Medical Corps of the Navy will be held about August 7 at Washington, D C, Boston, New York, Philadelphia, Norfolk, Va, Charleston, S C, Great Lakes, Ill, Mare Island, Calif, and Puget Sound, Wash Applicants must be citizens of the United States, and must submit satisfactory evidence of preliminary and medical education The first stage of the examination is for appointment as assistant surgeon in the Medical Reserve Corps and embraces anatomy, physiology, materia medica and therapeutics, general medicine, general surgery and obstetrics The successful candidates then attend a course of instruction at the Naval Medical School, which will begin about October 1 During this time candidates will receive a salary of $2,000 a year with allowances for quarters, heat and light, and at the end of the course, if successful, will be commissioned as assistant surgeons in the navy to fill vacancies Full information regarding the physical and professional examinations, with instructions as to the proper method of submitting formal application, may be obtained by addressing the Surgeon-General of the Navy, Navy Department, Washington, D C

Personal—Dr Edwin D Kilbourne, who resigned his commission in the Medical Corps of the United States Army, and moved to Honolulu, has been appointed superintendent of a large hospital in that city——Dr Frederick W Shaw, Shiprock, N M, has resigned from the United States Indian Medical Service to accept a position on the medical staff of the Missouri State Sanatorium, Mt Vernon——Dr Charles H Yeagle, Chin Lee, Ariz, has resigned from the United States Indian Medical Service to enter private practice——Dr Calvin J K Moore, U S I M S, has resigned as physician to the Good Samaritan Hospital, Indian Wells, Ariz, to accept a position with a mining company in New Mexico——Dr Walter S Stevens has been transferred from Keshena, Wis, to Mt Pleasant, Mich——Dr Walter K Callahan has resigned from the United States Indian Medical Service at Owyhee, Nev, and returned to Oklahoma——Dr Fred L McDaniel, formerly stationed at Crown Point, N M, is now a member of the staff of the Ossawatomie, Kan, State Hospital——Dr Frederick Loe, U S I M S, Gila Crossing, Ariz, has been transferred to Cibecue on the White Mountain Reservation, Ariz, where he will also take up work formerly done by the agency farmer at that place——Dr Albert R Warner, U S I M S, Stewart, Nev, has resigned to accept institutional work in Colorado

Bequests and Donations—The following bequests and donations have recently been announced

University of Pennsylvania, to establish a professorship in surgical
University of Pennsylvania, to
research, $150,000, Hospital of the University of Pennsylvania, to
provide prizes for nurses and doctors, and Christmas presents for
children, $10,000, by the will of Dr J William White
St Joseph's, St Mary's, St Agnes' and Episcopal hospitals, Phila
delphia, each $200, by the will of Walter E Mooney
St Agnes' Hospital, Philadelphia, $3,000, Orthopedic Hospital, Phila
delphia, the clocks, furniture, books, pictures and remainder of the
estate amounting to nearly $33,000, the latter to be used in the construction of private rooms "to be used exclusively by gentlefolks who have insufficient means and are not proper patients for wards," by the will of Josephine R Monges

New York Medical College and Hospital for Women, contributions of $62,000 toward the $200,000 fund expected to be raised during the year, including $5,000 to endow a bed, from Mrs C A Wentworth, and $5,000 to endow a bed, by W S Gray

St Elizabeth's Hospital, Brighton, Boston, $1,000, by the will of Mary Murphy, Newton, Mass

Bowdoin College, Brunswick, Me, a donation of $27,000 to build an infirmary in memory of his son, Dudley S Coe, by Dr Thomas Upham Coe, Bangor, Me

Free Hospital for Women in Brooklyn, for the purchase of land if necessary, and for the erection and equipment of a suitable building to be used as a cancer hospital, interest in property at 511 Washington Street and 16 24 West Street, Boston, on the death of the daughter and sister of testatrix, Waltham (Mass) Baby Hospital $5,000, in memory of the daughter of testatrix, Alice M C Mathews, Convalescent Home of the Boston Children's Hospital, Wellesly, Mass, property at 9 Exeter Street, Children's Hospital, Boston, property at 1666 Washington Street, Boston Floating Hospital, property at 94 Beacon Street, Baldwinsville Cottage for Children, property at 71 73 Harvard Street, and 48 50 Burleigh Street, Cambridge, Vincent Memorial Hospital, property at 744 756 Washington Street, by the will of Mrs Anna Bolton Mathews

College of Physicians and Surgeons of Columbia University, New York, $100,000, as an endowment fund for cancer research, by the will of Emil C Bondy

St John's Guild, New York, $3,000, by the will of Miss Lillian Payne

New York Association for the Blind, the residuary estate amounting to about $100,000, by Mrs Ellen Corbett Stevenson

Methodist Episcopal Hospital, Brooklyn, a trust fund of $100,000, on the death of the beneficiary

New York Foundling Hospital, $10,000, by the will of Mrs Lizzie H Holme

For Vivisection Inquiry—Reference has heretofore been made (Feb 19, 1916, page 585) to a bill introduced into Congress providing for an investigation by the secretary of agriculture into experimentation on living animals Mr J M Whitty, secretary of the Vivisection Investigation League of New York, has recently visited Washington, D C, for the purpose of furthering the enactment of such legislation On June 17 he addressed an audience of twenty persons assembled under the auspices of the Anti-Cruelty League, an organization recently formed for the purposes indicated by its name, making the usual criticisms of vivisection The stock references to experimentation, so called, on human beings occurred during the course of the lecture, including references to Noguchi's inoculation of children with luetin, the intra-ocular use of tuberculin in an institution in Philadelphia, with alleged resulting impairment of vision in some cases and in others loss of sight, the subsequent use of tuberculin in a New York asylum, the use of a serum for immunization and cure of tuberculosis on children and the subsequent failure of the United States authorities to approve the preparation, the deaths of certain children in St Louis, after the injection of antimeningitis serum, and the alleged serious illness of certain persons in Brooklyn after the injection of antityphoid vaccine prepared by the New York City Board of Health The improvement that has followed the use of antityphoid vaccine in the United States Army and in other armies and under other conditions he attributed to sanitation, as he did also the improvement following the use of smallpox vaccine The gentleman had never heard of the federal law regulating the production and sale of serums and vaccines He made the remarkable statement that in New York City there are said to be 3,000 vaccines, antitoxins and serums on the market

A public hearing was set by the senate committee on agriculture for June 19, at which it is understood Mr Whitty was to appear

WAR NOTES

Medical Unit for War Service—Superintendent Dowling of the Boston City Hospital has organized a medical unit, for war service, composed of physicians and nurses, and reports that the organization is practically ready to take the field

Appeal for Surgical Instruments—Mrs Russell A Alger, Jr, 2039 Penobscot Building, Detroit, who has recently returned from a trip to France, in which she visited many hospitals, especially throughout Brittany, where thousands of wounded soldiers are being treated, makes an urgent personal appeal for the donation of all kinds of surgical instruments, which are greatly needed in these hospitals She requests that such instruments may be sent to her at the address given above, whence they will be forwarded without expense to France, there to be distributed to the hospitals most urgently in need of them

PROCEEDINGS OF THE DETROIT SESSION

MINUTES OF THE SIXTY-SEVENTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT DETROIT, MICH, JUNE 12 16, 1916

(*Continued from page 1999*)

HOUSE OF DELEGATES

Second Meeting—Tuesday Afternoon, June 13

The House of Delegates met at 2 p m, and was called to order by the President, Rupert Blue, Washington, D C, who said

Before proceeding with the deliberations of this meeting, I desire to thank the members of the House of Delegates for the honor which they have conferred on the Public Health Service by electing its Surgeon-General to the high office of President of this Association While I cannot feel that this action is taken because of any worth of mine, I am none the less personally deeply grateful

The secretary called the roll and announced a quorum present.

The minutes of the previous meeting were read and approved

Supplementary Report from Committee on Credentials

Dr D Chester Brown, Connecticut, chairman, presented a supplementary report of the Committee on Credentials

Report of the Committee on Scientific Exhibit

Dr Frank B Wynn, Indiana, chairman, presented the report of the Committee on Scientific Exhibit, which was referred to the Board of Trustees

The report is as follows

From the standpoints of variety, quantity and scientific excellence, the Scientific Exhibit is equal or perhaps superior to any previously given Particularization as to the forty-odd exhibits is impossible at this time To the local Committee on Scientific Exhibit, and to the hundred or more persons who without money and without price have labored so painstakingly and patiently in its preparation and presentation the Association owes a profound debt of gratitude. Their reward must be in the consciousness of sacrifice and service to our great profession.

It is interesting to observe that in the early history of this department of the Association, exhibits were almost universally of the museum type, illustrating anatomy and gross pathology Gradually these have given place to photographs, Roentgen-ray pictures and photomicrographs, to carefully worked out clinical and laboratory data. The microscopic and jar specimens today are more likely to be those showing the results of experimental study This does not mean that museum specimens should be abandoned as a feature of this work. Carefully prepared and well demonstrated, they will always carry a message of value to many persons in the Association They may not appeal to the laboratory experimentalist, but to the rank and file of membership they are good food, and the multitude of our profession must be fed on plain, wholesome scientific diet which all can digest

On the other hand, it is difficult to understand the position of the so-called practical physician who fails to see, in a research problem practical bearing It is the keen edge of science which lays open the slough of ignorance and lets in the healing light of truth

Another common delusion is that research investigations belong only to workers in hospitals and laboratories The correction of this error is one of the problems toward which the committee has directed most earnest effort In the highest sense of the words, every true and skilful physician is a research worker, every case a research problem The more carefully he uses his five senses, records, analyzes and weighs clinical data, brings to his aid the far-reaching knowledge of laboratory methods, the nearer to truth will he attain and the better doctor he becomes With these thoughts in mind your committee has labored not in vain Over a third of the exhibits presented at this session are by practitioners as distinguished from laboratory workers More and more those appearing before sections are presenting exhibits illustrative of their papers Thus does the scientific leaven grow

Cooperation is a slogan of the day which applies alike to big business and to medical organization It has occurred to your committee to inquire if the Scientific Exhibit might not be made the instrumentality for closer cooperation between the American Medical Association and the subsidiary societies The national Association cannot do everything relating to the profession of medicine, any more than the national government can act in all things for all the people. As state and county organizations attack and master problems with local or general bearing, they will pave the way for unity and power in the profession through the national body Accordingly, the committee has asked for exhibits from medical societies which would give evidence of initiative and activity along effective lines

For many years medical societies everywhere have promoted the propaganda for disease prevention, so that this movement has now acquired the momentum of popular approval, and seldom needs medical society support Closely related to the public health, but with social, moral and professional aspects, is the subject of criminal abortion This should be made the subject of medical society agitation and investigation The consensus of medical opinion is that there is an extreme laxness of public conscience toward criminal abortion What general practitioner has not been approached on this subject, not merely by the unfortunate girl but many times more frequently by married people? The newly married excuse themselves on the ground of youth, multitudinous social obligations, apartment residence where children are not wanted etc A few years ago a distinguished member of this Association, impressed by the prevalence of this criminal practice, presented before a gentlemen's literary club in a large city an essay entitled 'The Rights of the Unborn" The subject was treated in a scholarly and tactful manner, and deep was the chagrin of the essayist to have it received in a spirit of levity by those from whom a different attitude would have been expected This much for the culpability of the laity On the other hand, it is pertinent to inquire, if we are mindful of public duty, as individuals and as medical organizations in proclaiming the wisdom and righteousness of the family and pronouncing always our condemnation of those evil tendencies which lead to a decadent nation An exhibit is offered at this session dealing with this subject

So often have we as individuals and through medical organizations aided movements for disease prevention, that it is well to ask Is it not time we gave some attention to our own personal welfare? The motives which actuate commercial industrial and labor organizations are self-interest May it not be true that among the medical profession, conditions prevail which work hardships and injustice to our professional brethren and ought to be righted? Is not this an eminently proper subject for medical society investigation and action? An interesting and suggestive exhibit is presented by the Indiana State Medical Association, giving data collected dealing with this subject under the caption 'The Doctor's Welfare" It is interesting to observe that this same organization seventeen years ago inaugurated the first scientific exhibit in this Association

There are two concrete illustrations showing how medical societies may reach out in unthought-of ways for the betterment of the profession and for the public weal There are many statistical and cooperative investigations in which medical associations may engage, scientific, as opportunity suggests economic as related to the doctor s physical welfare and comfort social and recreational as bearing on his health happiness and efficiency, sociologic as showing how the physician with sympathy touches the "underworld' and unfortunate, how in the highest and best sense he becomes his brother s keeper" To bring about medical society activity and cooperation along these lines through the agency of the Scientific Exhibit is a question to which the committee has given most earnest thought and attention, with gratifying prospects of realization.

RECOMMENDATIONS

It is advised that the usual appropriation of $1,000 be made to cover the expenses of the Scientific Exhibit It is urged that the President of the Association be empowered to appoint at once a committee on awards consisting of three members, to the end that ample time may be given to the difficult and responsible task on hand

The committee deems it advisable to suggest the following changes in the method of organization and administration of the Scientific Exhibit

1 *Committee on Awards*—This committee should consist of three members, elected by The House of Delegates, on nomination by the Board of Trustees, each to serve a term of three years, the period of service of each to end on successive years

Comment This will insure greater thoroughness and continuity of effort, offering to exhibitors the satisfaction and stimulation which will be conducive to future endeavor

2 *Manner of Selecting the Director and Committee on Scientific Exhibit*—The director of the Scientific Exhibit to be elected by the House of Delegates on nomination by the Board of Trustees, he to select his colleagues on the Committee on Scientific Exhibit, subject to approval of the Board of Trustees

Comment This will safeguard the interests of the Scientific Exhibit and prevent the possibility at any time of a lapse through personal favoritism in the selection of the director or his colleagues

3 *Publication of Names*—The Committee on Scientific Exhibit should be published with the officers and other committees standing in THE JOURNAL regularly

Comment This will greatly aid the work of the exhibit Its value is certainly as great as that of any section Give it the dignity of the position it has won

4 *Stipulated Honorarium for the Director*—The committee is of the opinion that $1,000 or $1,500 would not be an exhorbitant sum for this purpose, in fact, it would comport with the type of man we believe should be selected to carry on this difficult and arduous task Seventeen years of continuous service in the supervision of this work warrants the chairman in making this recommendation For several years he has craved release from the burden of it all From time to time the longing has come to participate with you in other features of Association work, and then the appreciative and encouraging words of the many friends of the exhibit would persuade him to "stay yet a little while" Length of service must now be the excuse for yielding to impulse in seeking to place the burden on others Accordingly, I may speak frankly concerning matters which will affect my successor

The director who undertakes this responsibility faces no easy task Its success will involve not only constant thought and attention, but much real physical as well as mental strain He must be resigned to labor arduously several days before, and throughout the annual sessions, denying himself the privileges of section or other phases of the Association's activities He should attend meetings of medical men, and visit institutions and laboratory workers in the interest of the exhibit

He cannot manage the Scientific Exhibit by commercial standards In dealing with the clientele of patrons who make the exhibit possible, patience, tact and wisdom are necessary, sometimes real generalship is required to make it go He should furthermore be a man to command respect and support from scientific workers throughout the country—with head and heart and unflagging industry for scientific ideals Such labor and such sacrifices as he will be called on to make to insure the success and perpetuity of the Scientific Exhibit, the Association should not expect of him gratuitously Grant an honorarium becoming the dignity of the man and the service

Associated with the birth and growth of this child of the Association I would be recreant to duty and to the loyal support accorded all these years by the House of Delegates, the Board of Trustees and hundreds of scientific workers all over the country, were I to put this work aside lightly and without serious thought for its future growth and permanence The Scientific Exhibit will live because of what it is and what the Association stands for In sadness, but in confidence, I pass the reins to another—conscious that the idealism and virility of this great organization will ever insure the forward march toward scientific progress and service to our fellows

Supplementary Report of the Board of Trustees

Dr Philip Mills Jones, California, presented the following supplementary report of the Board of Trustees

In 1914, the House of Delegates passed the following resolution

> *Resolved,* That the Board of Trustees of the American Medical Association shall be permitted to accept, at their discretion, patents for medical and surgical instruments and appliances, as trustees, for the benefit of the profession and the public, provided, that neither the American Medical Association nor the patentee shall receive remuneration from these patents

For this, the Board of Trustees, in order to make possible the work of carrying out the desire of the House, requests that the following be now substituted

> *Resolved,* that the Board of Trustees of the American Medical Association may accept, at their discretion, to hold, to control and to manage, as trustees for the benefit of the people and the protection of the medical profession, such patents on chemicals, remedial or diagnostic substances, medical or surgical instruments or appliances, or anything whatsoever that may be used in the treatment of disease or infirmity and for which a patent may be issued, as the patentee may desire to convey to the American Medical Association for the public protection and benefit provided, that the patentee shall surrender all claim to remuneration from the royalties or otherwise on such patent or patents to the Board of Trustees of the American Medical Association, which Board of Trustees shall not exact from the manufacturer or producer under any such patent or patents, any royalty or other pecuniary compensation or return therefrom, unless, in the judgment of the Board of Trustees, the exaction of such royalty shall appear to be wise and just and for the better protection of the public or the medical profession

Dr Wendell C Phillips, New York, moved that the recommendation of the Board of Trustees be adopted

Seconded and carried

Report of Reference Committee on Legislation and Political Action

Dr E J Goodwin, Missouri, chairman, presented the report of the Reference Committee on Legislation and Political Action, as follows

To your Reference Committee on Legislation and Political Action has been referred the report of the Council on Health and Public Instruction and a statement from the Virginia State Board of Health

The report of the Council on Health and Public Instruction is a voluminous document reporting progress on the activities of the Association which brings the organization more intimately in touch with the public than does any other department of our Association The Council makes only one recommendation that requires action by the house, and that is in connection with the death of our beloved fellow worker Dr H B Favill, which we quote "In order that a proper appreciation of the life, character and professional activities of Dr Favill may appear on the records of the Association, the Council requests that a committee be appointed to draft suitable resolutions for adoption by the House of Delegates"

Your Reference Committee, bowed with grief and sorrow by our great loss, approves the recommendation and suggests that the President appoint the four remaining members of the Council on this committee

The effort to investigate present public health conditions, an undertaking endorsed by the House at the session of 1914 and again in 1915, is approved, and the program previously established by the Council to pursue this investigation is reaffirmed

The Council reports the appointment of a committee on social insurance which has been confirmed by the Board of Trustees, and that committee has presented an exhaustive statistical study of the medical profession of the United States on the ratio of physicians to population, their geographic distribution, and other statistical facts of importance to the profession This committee purposes to undertake in the near future (1) to educate the American medical profession in the general principles of social insurance, (2) to serve as a bureau of information for the medical profession in the various forms of social insurance both in European countries and in the United States, and (3) to appear before legislative bodies in this country when advisable for the purpose of fostering a friendly understanding between all parties concerned in health legislation and to protect the legitimate economic interests of the medical profession The broad scope of this initial report gives us our first insight of a subject which will soon become an important factor in the social and economic status of the practitioner of medicine, and prepares us to meet the new conditions as they arise Your Reference Committee approves this undertaking and in order that all members of the Association may be brought into close touch with the work of the social insurance committee, we recommend that each constituent state association be requested to establish a committee on social insurance to work in conjunction with the committee on social insurance of the American Medical Association

The success and popularity of Public Health Sunday, as well as the resultant influence on the people toward observing the law of hygiene and sanitation has induced the Council to close as well as begin our annual sessions with a public health demonstration Therefore, with the approval of the Board of Trustees arrangements have been made for addresses on public health topics on Friday afternoon, June 16, in the Lyceum Theatre The Michigan State Board of Health and the Detroit Department of Health are cooperating with our Council and have arranged for a public health parade just before the meeting

Of the other activities of the Council itself we need mention, with our approval only the work of the Medicolegal Bureau, the Standard Study Program for Women's Clubs originated by Dr S J Trumbine Secretary of the State Board of Health of Kansas, which has been adopted by the Conference on State and Provincial Boards of Health and the General Federation of Women's Clubs for general distribution to women's clubs throughout the country, and the large number and great variety of pamphlets on public health topics printed and distributed, there being pamphlets on forty-five different topics with a total distribution of 1,188,500

The subcommittees of the Council have continued their activities with most commendable zeal, and each shows very satisfactory progress The Committee on Women's and Childen's Welfare, when Dr Lenna L Means was made chairman three years ago, centered its activities on baby health work. The committee now reports widespread interest in the baby health movement, and expects the work to 'yield nation-wide results" Your Reference Committee desires to lay special emphasis on the great importance of this subcommittee, and in commending the members for their intelligent execution of their duties, urge on the constituent associations to seek first the assistance of this subcommittee and to use the American Medical Association score card in all local baby health movements The committees on cancer, conservation of vision and cooperation with the National Education Association are the other subcommittees and their work is endorsed, and their members commended for their unselfish labors

The statement from the Virginia State Board of Health referred to your committee in conjunction with the report of the Council on Health and Public Instruction, we found consisted of a protest against the survey of Virginia by the investigator of state public health activities The statement therefore should be lodged with the Council on Health and Public Instruction to which your reference committee recommends it be now referred

It was moved that the report be adopted

Seconded and carried

The communication follows

We the undersigned members of the State Board of Health of the Commonwealth of Virginia and likewise members of the American Medical Association hereby protest to the House of Delegates against the issuance, with the sanction of this association of the report of Dr C V Chapin of Providence, Rhode Island on *State Boards of Health*

In making this protest, we beg leave to assign the following grounds

1 Conditions in different sections of the United States are so diverse as to make it more than doubtful whether a system of comparative scoring or rating fair to all the States and to all their sanitary work can be devised.

2 If any fair system of comparative scoring be possible it is submitted that the relative importance of the various units of rating will be differently estimated by sanitarians of experience and that the organization and scope of an ideal State Board of Health would be debatable

3 Even were there substantial agreement as to the essentials it is submitted that a system of scoring if practicable at all could only be devised by the united thought and labor of sanitarians familiar with the peculiar problems of all sections and able to determine as far as may be possible the importance of the various endeavors of the different boards

4 It follows that a task of so much magnitude should not be left to one man it matters not how eminent he may be and that his system of scoring in the circumstances should not be published to the country as this association's deliberate judgment or as endorsed by its membership without further investigation

5 In view of these facts it is submitted that Dr Chapin might at least have given the boards whose work he reviewed the opportunity of correcting plain errors into which he had fallen Yet in spite of the statement in the foreword of the report that six months were given for verification the Health Commissioner of Virginia knew nothing of what was being done from the time Dr Chapin spent a few hours in his office until the printed report was received

6 As a result and altogether apart from the unsatisfactory and arbitrary method of scoring adopted by Dr Chapin plain errors of statement exist in those parts of his text and tables relating to Virginia and efforts to have errors corrected by Dr Chapin have been futile.

7 It is submitted finally that it is inadvisable for the American Medical Association to sponsor comparisons between the work of States differently peopled and with different climate and wealth certainly when such comparisons rest on the judgment of one man

Wm M Smith
President State Board of Health
John B Fisher
Secretary State Board of Health
O C Wright
Stuart McGuire
Geo Ben Johnston
L T Royster

Report of Reference Committee on Amendments to the Constitution and By-Laws

Dr Floyd M Crandall New York chairman presented the report of the Reference Committee on Amendments to the Constitution and By-Laws as follows

The Committee on Amendments to the Constitution and By Laws respectfully reports as follows

The Judicial Council in its annual report recommends that in Chapter III Section 1, of the By-Laws, the word 'day' be stricken out and the words "two days" be substituted The reference committee recommends the adoption of the following substitute for this suggestion of the Judicial Council

Regular Sessions —The House of Delegates shall meet annually on the Monday preceding the opening of and at the same place as the Scientific Assembly of the Association.

Amend Chapter IV, Section 3 of the By-Laws by striking out the word "third' and substitute the word 'second,' so that the section shall read

The election of officers shall be the first order of business of the House of Delegates after the reading of the minutes on the afternoon of the fourth day of the session of the House of Delegates (the second day of the Scientific Assembly)

Amend Chapter X Section 1, of the By-Laws by striking out the words "the general meeting shall be held at 10 30 a m on the first day of the Scientific Assembly' and insert the words "shall be held on the evening of Tuesday of the week of the Annual Session"

The remainder of the chapter shall remain as at present

Amend Chapter II, Section 2, of the By-Laws by striking out the whole section, and substituting in its place the following

Sec. 2 Limit of Time for Introduction of New Business —No new business shall be introduced in the House of Delegates after the second day of the Annual Session of the House of Delegates unless by unanimous consent and such new business so presented shall require a two thirds affirmative vote for adoption provided however that unless otherwise provided in these by laws new business referred to the House of Delegates by the officers of the sections the Trustees or by formal action of the sections themselves may be presented to the House of Delegates at any time preceding the meeting at which the election of officers shall take place.

The Judicial Council recommends an amendment to Article 9, Section 1 of the Constitution by adding the words 'a chairman of the House of Delegates" The reference committee recommends the adoption of the following substitute

The general officers of the Association shall be a President four Vice Presidents a Secretary a Treasurer and a Chairman and a Vice Chairman of the House of Delegates

As an amendment to this effect was submitted last year it is within the power of the House of Delegates to act on it at this session

The Judicial Council further recommends that the following section shall be added to Chapter IV of the By-Laws to read as follows

Sec. 4 The House of Delegates shall annually elect a Chairman and a Vice Chairman these officers to serve for one year or until their successors are elected and installed These officers must be Fellows of the American Medical Association and must have been Fellows of this Association for at least two years immediately preceding their election to this office They need not, however, be members of the House of Delegates, but they shall possess all powers of the presiding officer of that parliamentary body These elections shall follow the election of the Treasurer of the Association

Amend Chapter V, Section 1, of the By-Laws by striking out the words "at the meetings of the House of Delegates, and shall perform such duties as custom and parliamentary usage requires"

Add to Chapter V of the By-Laws the following

Sec 5 Chairman of the House of Delegates—The Chairman of the House of Delegates shall preside at the meetings of the House of Delegates and shall perform such duties as custom and parliamentary usage require He may at any time make suggestions in writing to the House of Delegates

Sec 6 Vice Chairman of the House of Delegates—The Vice Chairman of the House of Delegates shall officiate in the place of the Chairman during his absence or at his request In case of the death, resignation, or removal of the Chairman, the vacancy shall be filled by the Vice Chairman

Renumber Section 5 to be Section 7

The committee approves these amendments and recommends their adoption

Amend Chapter VII, Section 1, of the By-Laws by striking out the words "these Committees shall be nominated by the President and elected by the House of Delegates, unless otherwise provided for in these By-Laws"

Substitute in their place the following words "The standing committees shall be nominated by the President and elected by the House of Delegates, unless otherwise provided for in these By-Laws"

"Reference Committees and special Committees shall be nominated by the Chairman of the House of Delegates, and elected by the House of Delegates unless otherwise provided for in these By-Laws"

The Judicial Council recommends that the following paragraph be added to Chapter VII, Section 4, of the By-Laws

In all cases which arise between a constituent association and one of its component county societies, between component county societies of the same constituent state association and the component society to which said member belongs, and between members of different component societies of the same constituent state association, the Judicial Council of the American Medical Association shall have appellate jurisdiction in questions of law and procedure but not of fact

The committee approves this amendment, and recommends its adoption

The report of the Committee on Social Insurance having been presented in abstract by the Chairman of the Judicial Council, in connection with his regular report, it was referred to the Committee on Amendments to Constitution and By-Laws After hearing the statement of Dr F L Van Sickle of Pennsylvania, and on due deliberation, it was voted to refer that report to the Reference Committee on Legislation and Political Action

The following amendment to Chapter VIII, Section 6, of the By-Laws was presented to the chairman of the committee yesterday by Dr Robert M Funkhouser of Missouri As it was not presented to the House of Delegates, it could not be acted on The committee, however, considered the question at considerable length and decided to present it to the House at this Session

The amendment reads as follows

No person can become an associate Fellow who can be a member of the American Medical Association in the regular way

The Judicial Council recommends an amendment to Article X, Section 2, of the Constitution by adding to the section as it now reads the following

No Trustee shall be eligible to any other elective office, the term of which runs concurrently with the term for which the said Trustee has been elected

This being an amendment to the Constitution, it will necessarily lie over until next year

The Judicial Council also recommends an amendment to Chapter IV, Section 2, of the By-Laws by adding the following

No member of the House of Delegates shall be eligible to the office of President or Vice President, nor shall a member of the Board of Trustees be eligible for election to any other elective office, the term of which runs concurrently with the term for which the said Trustee has been elected

The committee approves this amendment and advises its adoption

The Reference Committee on Amendments to the Constitution and By-Laws proposes the following amendment to Chapter VII, Section 3, Paragraph (c) of the By-Laws

Eliminate the words "Committee on Transportation and Place of Session"

To bring the By-Laws into harmony, should this amendment be adopted, it further recommends that Chapter VII, Section 6, of the By-Laws, which defines the duties of the Committee on Transportation and Place of Session, be eliminated

Also that the sections following be renumbered

The report was read and considered seriatim On several motions, which were duly seconded and carried, the separate sections of the report were adopted

Dr Arthur T McCormack, a delegate representing the Kentucky State Medical Association, advised the House that the delegation from Kentucky, acting under instructions of that constituent state association, voted in the negative on the adoption of the recommendation of the Reference Committee on Amendments to the Constitution and By-Laws, giving the Judicial Council of the American Medical Association the appellate jurisdiction as recommended in the report of this Reference Committee, and asked that a minute be made recording this negative vote of the Kentucky delegation

Dr E F Howard, Mississippi, stated that the delegation from Mississippi desired that a similar minute be entered, noting the negative vote of that state medical association on this same subject

Dr W E Anderson, Virginia, moved that the report be adopted as a whole

Seconded and carried

Report of Reference Committee on Reports of Officers

Dr A R Mitchell, Nebraska, chairman, presented the report of the Reference Committee on Report of Officers, as follows

Your Committee on the Reports of Officers begs leave to submit the following

Membership

We note with regret and with sorrow the loss of 441 Fellows by death The other losses of 713 not eligible and 658 for nonpayment of dues but emphasizes the importance of holding close our present membership and also of the importance of continuing the campaign for adding every eligible physician to our ranks The loss of 1,540 by resignation is a very small figure, and is largely accounted for by many who retire annually from active service in the profession The addition of 3,293 to the Fellowship by transference from the subscription list is an evidence of the excellent business policy of the association—considering the fact that the number of graduates from medical schools has decreased from 8,035 in 1906 to 5,315 in 1915, or more than 33 per cent—the net gain of 815 is very satisfactory

The recommendation of your secretary that the affairs of the Medical Society of Wyoming be referred to the Judicial Council with power to act is endorsed by your committee

We endorse the action of the Board of Trustees in its expenditures necessary to further the splendid work of the Council on Medical Education This work is of such far-reaching importance and is being accomplished in such a thorough and methodical manner that it should receive the support and the commendation of all right thinking people

Recognizing the truth and the importance of the suggestion that "we are entering on a period of great changes in social organization, a period which will necessitate far closer organization of the people in all forms of activity, and that this particularly calls for united strength in opposing disease and further—that it is better that we should initiate the necessary changes than to have them forced on us" we most seriously recommend a continuance of the work through the forces now having it in charge Your committee endorses every word of the report which refers to The Journal of the American Medical Association and of the master mind which directs it, it is a never failing fountain of scientific information, a bond of union between Fellows of the Association—and it is ours

We recommend that the publication of the *Archives of Internal Medicine* and the *American Journal of Diseases of Children* be continued, and that the trustees supply the necessary funds to meet any deficiencies until the journals become self-supporting The American Medical Directory is a credit to our profession, and its publication should be continued It is so valuable that it seems probable to your committee that a moderate addition to its selling price would not reduce the subscription list.

Organization

While we deplore the necessity of forcing or coaxing enlightenment on a certain percentage of the profession, we commend the methods of organization work and recommend that it be continued until all eligible physicians are enrolled in the cause of scientific medicine The Cooperating Medical Advertising Bureau should be continued The work of the Propaganda Department is so well understood that to mention it is to endorse its work and the same is true of the Council on Pharmacy and Chemistry We advise that such books as 'Useful Drugs" be more prominently advertised in The Journal with a view of increasing their circulation among the members of the profession The Council in the opinion of your committee, should keep the profession in close touch with the dangers as well as with the possibilities and limitations of vaccine therapy and of radium The Journal should continue and increase its efforts to enlighten the profession on the clinical action of drugs and to show the members the fallacy and the wickedness not to say the unscientific methods which they use in their cases when guided by commercial literature in prescribing

The memorial to Congress regarding proprietary medicines is referred back to the board without recommendation which means that your committee has little confidence in the success of the effort

We congratulate the profession that its business has been so well handled that it possesses means to defend itself against attacks of unholy and of vicious interests The financial success of "patent medicine," for so many years, is a sad commentary on the lack of medical intelligence or want of medical enlightenment of the people We hope that we may win in the contest now before the court and thus vindicate the efforts of the American Medical Association in its efforts to conserve the health and the dollars of the people The good work should go on whether we win or lose

Report of the Council on Scientific Assembly

Your committee recommends the adoption of the recommendations of the council so far as they relate to the Section on Hospitals that is that the section be discontinued but it seems to us wise that this subject be discussed from time to time by assigning to it one or more units at the discretion of the Council on Scientific Assembly in some other section

We endorse the recommendation that the term "unit" be used as a basis for classifying the sections covering the maximum number of papers to be read before them The motion offered by Dr Murray of New York, "that the Section on Stomatology shall be modified by adding thereto Gastro-Enterology and Proctology and that the section as reconstituted be accorded three units," is recommended back to the council for action

While the recommendation made by the council that Sec. 3 Chapter XI, of the By-Laws should really go to the Committee for Amendment to the Constitution and By-Laws the rest of the recommendation, with the concurrence of the above committee is recommended for adoption. The council should be granted the four requests it makes (1) adoption of the definition of the word unit', (2) the tentative adoption of the number of units assigned to the sections, (3) the discontinuance of the Section on Hospitals and (4) the modification of the By-Laws regarding orations

We endorse the recommendations of President Vander Veer covering the subject of preparedness and your committee cannot too strongly emphasize the importance of the cooperation of the American Medical Association with the Congress of American Physicians and Surgeons the Clinical Congress of Surgeons of North America, and the American College of Surgeons and other organizations active in this movement for medical preparedness under the direction of the heads of the military services of the United States "The Albany Idea seems to your committee practical and worthy of consideration or adoption

We unreservedly endorse the recommendation of the Red Cross Committee

The following communication from the Women's Christian Temperance Union is recommended for reference to the Council on Health and Public Instruction

Rest Cottage Evanston Ill,
June 3, 1916

To the House of Delegates of the American Medical Association
Detroit Michigan

Dear Sirs —In view of the increasing desire on the part of the nations of the world for relief from the evil effects of alcoholic liquors on society and in view of the fact that all the warring nations of Europe have found that liquor drinking must be curbed because of its interference with health efficiency and safety, we, representing 400 000 women members of the National Women's Christian Temperance Union respectfully request that your honorable body give expression at this annual meeting of the American Medical Association to such a warning against alcoholic liquors as shall strengthen the hands of boards of health and temperance organizations now combating the liquor evil

One of the chief causes of the alcohol habit is the ignorance of the mass of the people concerning the real nature of alcohol They have been taught that alcoholic liquors give health and strength, that they are tonic and remedial The brewing and whisky trades advertise that their products are foods and tonics and aids to digestion, and that they are endorsed and recommended by physicians the world over The medical profession owes it to itself and to the public to offset this dangerous and misleading advertising by a statement of the truth

The medical society of Russia at its meeting in 1915 issued a notable document against alcohol a copy of which is appended for the information of any of your honorable body who may not have seen it Your petitioners hope for as strong and helpful an expression from the great American Medical Association as that emanating from your Russian confreres

Yours sincerely
Anna A Gordon
President
Martha M Allen
Supt Dept of Medical Temperance

Respectfully submitted

A R Mitchell,
Ben R McClellan,
E R. Stitt

Dr C H. Good, Indiana, moved that the report be adopted Seconded

Dr Dwight H Murray, New York, moved as a substitute that that section of the Report of the Reference Committee on Reports of Officers, concerning the Section on Stomatology, be first considered, and that there be substituted for the recommendation of the Reference Committee the following namely, the subjects of Gastro-Enterology and Proctology be added to the subject of Stomatology, and that a Section on Stomatology, Gastro-Enterology and Proctology be constituted and substituted for the present Section on Stomatology

Seconded by Dr Randolph Winslow, Maryland

Dr Dwight H Murray, New York, moved that the House go into a Committee of the Whole

Seconded and carried

The House went into a Committee of the Whole

When the House reconvened, a vote was taken on the substitute motion of Dr Murray and it was declared adopted

Dr Arthur T McCormack, Kentucky, then moved that the report of the Reference Committee on Reports of Officers be adopted as amended

Seconded and unanimously carried

Report of Reference Committee on Medical Education

Dr L W Littig Iowa, chairman, presented the report of the Reference Committee on Medical Education as follows

Your committee has carefully reviewed the report of the Council on Medical Education and begs to report as follows

Your committee endorses the recommendation of the Council that a year's internship in an approved hospital be made an essential part of a medical curriculum, and that state licensing boards be urged to make such hospital year a legal requirement for the license to practice medicine in their respective states, and that such action be taken at the earliest practicable date With this object in view, it is further recommended that legal authority be obtained by state licensing boards to inspect the hospitals in their respective states to establish rules governing their conduct, and to list as approved only those complying with such rules It is suggested that the Council cooperate with state licensing boards and other agencies interested in this effort to improve existing conditions in hospitals in this country

Your committee recommends that after Jan 1 1918 no medical college be retained in Class A by the Council on Medical Education that does not require for admission at least two years of work in a college of arts sciences approved by the Council, or, in lieu thereof, have an education equivalent to the above, as demonstrated by a fitting and properly conducted examination, approved by the Council Your committee believes that this standard should be adopted at this time so as to bring medical education into better coordination with general education in this country Nevertheless, it should be understood that this represents the highest requirement of preliminary education that should be legally established in this country Furthermore, it is recommended that the Council cooperate with the National Educational Association, with the North, Central and the Southern Associations of Colleges and Secondary Schools, and with other educational agencies, in the efforts now being made to save one or two years of the student's time during the period of elementary and high school education This saving will enable students to graduate from the medical school at an average age of 24 or 25 years

Your committee recommends that the Council cooperate with educational organizations, state medical societies, state licensing boards and any other interested organizations, in an effort to secure laws regulating the chartering of educational institutions, so that only those having adequate endowment, a reasonable equipment and an ample number of skilled teachers be given authority to confer degrees, or educational qualifications of any kind

Your committee recommends that all legislation regulating the practice of the healing art, by whatever method or system, require the same educational standard as that with which physicians have to comply, and that this educational standard be the minimum that will guarantee the ability to differentiate between normal and abnormal conditions in the human body, to differentiate between and to recognize diseases and intelligently to apply treatment

The Council has done well to call attention to the discrimination by certain Canadian provinces against the medical schools of this country The adjustment of this matter has been properly referred to the state licensing boards, and an amicable adjustment of the difficulty is hoped for

Your committee recommends that the Council secure such information as it can regarding all medical colleges abroad, and that it prepare a list of such institutions as it deems worthy of recognition, and submit such list to the state licensing boards of this country

Your committee emphasizes the Council's recommendations that the National Board of Medical Examiners as it is now constituted be heartily approved Such a board is in position to establish a medical qualification which may eventually not only be recognized by the state licensing boards of this country, but may also be looked on by medical authorities abroad as a qualification of unquestioned worth This board is in position to develop methods of examination which may lead to their adoption by the various state licensing boards, or at least will be worthy of their most careful study and emulation The qualification furnished by this board will also be a stimulus to ambitious and aspiring medical students, as its possession will be both an honor and an asset

In conclusion, the committee wishes to congratulate the Council on Medical Education, and especially its distinguished chairman, for the splendid results obtained by its untiring and unselfish efforts

Respectfully submitted

L W LITTIG, *Chairman*,
W H SEEMANN,
HUGH N MACKECHNIE,
A H LEVINGS,
WILLIAM S LALOR

Dr E J McKnight, Connecticut, moved that the report be adopted

Seconded and carried

New Business

Dr John F Anderson, New Jersey, delegate from the Section on Pharmacology and Therapeutics, presented the following resolution, which was referred to the Reference Committee on Hygiene and Public Health

WHEREAS, Methods for the bio assay of certain drugs are to be included in the U S P IX, although, with the exception of that for solution of hypophysis they are optional, and

WHEREAS, It is important that uniform standards be employed for such assays, therefore, be it

Resolved, That the Section on Pharmacology and Therapeutics urgently recommends the House of Delegates to request the Secretary of the Treasury to authorize the United States Public Health Service to prepare and distribute for use in the bio assay of cannabis, aconite, digitalis, strophanthus, squill, suprarenal gland and hypophysis, the standards as recommended in U S P IX

(The foregoing resolution was adopted by the Section on Pharmacology and Therapeutics, June 13, 1916)

Mr H M McClanahan, Nebraska, delegate from the Section on Diseases of Children, offered the following preamble and resolution

WHEREAS, The problems of disease in children are peculiar and of far reaching importance, therefore be it

Resolved, That the Section on Diseases of Children requests that the House of Delegates authorize and establish a Council on Infant Morbidity and Mortality

The resolution was referred to the Reference Committee on Hygiene and Public Health

Dr Jere L Crook, Tennessee, informed the House of Delegates that Dr John B Murphy, a Past President of the Association, was ill at Atlantic City, and moved that the House of Delegates direct that a telegram be sent to Dr Murphy expressing sympathy and best wishes for a speedy recovery

Seconded and carried

Dr Stewart J Roberts, Georgia, moved that Dr George H Simmons, Illinois, editor of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, be asked to address the House of Delegates at this time

Seconded and carried

Dr Simmons thanked the members of the House of Delegates for the compliment implied in the action taken, and stated he did not wish to occupy the time of the House of Delegates at this juncture

Dr Arthur T McCormack, Kentucky, moved that the Reference Committee on Legislation and Political Action be instructed to bring before the House of Delegates, at the next meeting, a resolution endorsing pending legislation, giving greater scope and opportunities to the United States Public Health Service, and in maintaining the splendid work that is being done by that service

Seconded and carried

Dr Charles J Whalen, Illinois, moved that the House of Delegates adjourn until 2 p m Thursday

Accordingly, the House of Delegates thereupon adjourned

Third Meeting—Thursday Afternoon, June 15

The House of Delegates met and was called to order at 2 10 p m by the President

The minutes of the previous meeting were read and approved

Dr F C Warnshuis, Michigan, rose to a question of personal privilege and presented the following communication

To the House of Delegates, American Medical Association

Gentlemen —Having learned that the premature prediction in the *News* that Dr Charles H Mayo would be elected president of your association might lead to criticism of Dr Mayo and his friends, I wish to say that the story printed in today's paper did not come from either the doctor or any of his friends

The story was obtained by a *News* reporter independently of any members of your Association, and he was not aware that any impropriety was being committed in the publication of this report

HENRY A MONTGOMERY,
City Editor, Detroit *News*

Dr Warnshuis stated that he desired to advise the House that the unfortunate premature announcement, in the local newspapers, of the result of the election to be held this afternoon, was given publicity without the knowledge or consent of any member of the local or state profession, or of Dr Charles H Mayo himself, and that he desired to make this explanation in order that the members of the House might be fully informed, and that they might choose a President-Elect without bias which might be occasioned by this premature publication if this explanation was not made

The secretary called the roll, and 128 delegates responded

Election of Officers

The next order of business being the election of officers, the House proceeded with an election, which resulted in the choice of the following

President—CHARLES H MAYO Rochester, Minn

First Vice President—L F BARKER, Baltimore

Second Vice President—JOHN LFEMING Chicago

Third Vice President—J HENRY CARSTENS, Detroit

Fourth Vice President—GEORGE F KEIPER, Lafayette, Ind

Secretary—ALEXANDER R CRAIG, Chicago

Treasurer—WILLIAM ALLEN PUSEY Chicago

Chairman of the House of Delegates—HUBERT WORK, Pueblo, Colo

Vice Chairman of the House of Delegates—DWIGHT H MURRAY, Syracuse, N Y

Members of the Board of Trustees—A R MITCHELL, Lincoln Neb OSCAR DOWLING Shreveport La, E J MCKNIGHT, Hartford Conn.

Judicial Council—J N BLACK Pueblo, Colo

Council on Health and Public Instruction—FRANK BILLINGS Chicago

Council on Medical Education—WILLIAM D HAGGARD, Nashville, Tenn

Council on Scientific Assembly—J SHELTON HORSLEY, Richmond Va

The secretary presented a list of applicants for Associate Fellowship endorsed by the Judicial Council and the officers of the Sections on Stomatology, on Pathology and Physiology and on Pharmacology and Therapeutics

Dr Wendell C Phillips, New York, moved that the secretary be authorized to cast the ballot of the House in each instance in which the applicant is not eligible for membership in the state association of the state in which he resides, and provided no objection to the applicant is filed by the officers of the said state association.

Seconded and carried

Report of Committee on Transportation and Place of Session

Dr J R Pennington, Illinois presented the report of the Committee on Transportation and Place of Session, as follows

Invitations have been received from Atlantic City, N J Chicago Columbus Ohio and New York City two of which—Chicago and Columbus—were from the commercial associations only and two—those from Atlantic City and from New York City—were from the medical societies of these respective districts supported by the convention bureaus

After carefully considering and fully discussing the advantages of both Atlantic City and New York City for the next annual session of the Association your committee deems it best to recommend to the House of Delegates that both New York City and Atlantic City be placed in nomination, and that a ballot be taken

By order of the committee

J RAWSON PENNINGTON,
Chairman

On motion, duly seconded and carried the report was adopted

Before a ballot was taken, the advantages of the two places in nomination were discussed by Drs Floyd M Crandall F E. Sandern, Wendell C. Phillips and Dwight H Murray all of New York speaking for New York City, and Drs Emery Marvel New Jersey and Randolph Winslow, Maryland speaking for Atlantic City

A ballot was then taken which resulted in the choice of New York City as the place of meeting for the 1917 session

On motion duly seconded and carried, the choice of New York City was made unanimous

Report of the Reference Committee on Legislation and Political Action

Dr E J Goodwin Missouri chairman presented the report of the Reference Committee on Legislation and Political Action, as follows

To your Reference Committee on Legislation and Political Action has been referred the following

Dr Arthur T McCormack, Kentucky moved that the Reference Committee on Legislation and Political Action be instructed to bring before the House of Delegates at the next meeting a resolution endorsing pending legislation giving greater scope and opportunities to the United States Public Health Service and in maintaining the splendid work that is being done by that service

Seconded and carried

Your reference committee has carefully considered the purpose of this motion and takes pleasure in recommending that the following resolution be adopted

Resolved, That the House of Delegates of the American Medical Association in annual session assembled, endorses pending legislation in the Congress that will give greater scope and opportunities to the United States Public Health Service for protecting the health and lives of the people and maintaining the high standard of efficiency already established by that service.

E J GOODWIN, Chairman
FREDERICK L VAN SICKLE,
H R. MCGRAW,
CHARLES W HANNAFORD,
C P MERIWETHER.

It was moved that the report be adopted.

Seconded and carried

Report of Reference Committee on Hygiene and Public Health

Dr Arthur T McCormack, Kentucky, chairman, presented the report of the Reference Committee on Hygiene and Public Health as follows

Your Reference Committee on Hygiene and Public Health had submitted to it two resolutions, the one by the delegate from the Section on Diseases of Children requesting that the House of Delegates authorize and establish a Council on Infant Morbidity and Mortality Your committee recommends that this suggestion be not concurred in The second, a resolution presented by the delegate from the Section on Pharmacology and Therapeutics, requesting that the House of Delegates memorialize the secretary of the treasury, asking that the United States Public Health Service be authorized to prepare and distribute for use in the bio-assay of certain drugs the standards as recommended in the Ninth U S P Your committee recommends that the president and secretary of the association request the secretary of the treasury to take this action

Signed by order of the committee

A. T MCCORMACK,
Chairman

It was moved that the report be adopted

Seconded and carried

Report of Reference Committee on Amendments to the Constitution and By-Laws

Dr Floyd M Crandall, New York, chairman, presented the report of the Reference Committee on Amendments to the Constitution and By-Laws, as follows

The following amendment was proposed at the meeting of the House of Delegates held Tuesday June 13

Amend Chapter VII, Section 3 Paragraph (*c*) of the By-Laws by eliminating the words 'Committee on Transportation and Place of Meeting"

To bring the By-Laws into harmony, should this amendment be adopted a further amendment was proposed to Chapter VII, Section 6 of the By-Laws by eliminating the section

Also that the sections following be renumbered

The committee approves these amendments and advises their adoption

The following amendment was proposed at a meeting of the House of Delegates, held Tuesday, June 13

To amend Chapter VIII Section 6, of the By-Laws by adding the words "no person can become an Associate Fellow who can be a member of the American Medical Association in the regular way"

The committee recommends that the subject of Associate Fellowship be referred to the Judicial Council for report next year

The Committee on Amendments to the Constitution and By-Laws directs me as chairman to present the following

Moved That the secretary of the Association be empowered to edit the amendments proposed and adopted at this session and to make such changes in numbering and arrangement as may be necessary to bring them into harmony with the Constitution and By Laws as they now exist, but he is not empowered to alter the sense or meaning of any amendment adopted

This report was considered section by section, and on several motions, duly seconded and carried, each section was adopted

Dr Arthur T McCormack, Kentucky, moved the adoption of the report as a whole

Seconded and carried

Dr W T Williamson, Oregon, moved that the House of Delegates extend a cordial vote of thanks to the Wayne County Medical Society, the citizens of Detroit, especially those who took part in the opening meeting, and those who extended courtesies and entertainment to the American Medical Association

Seconded by Dr Thomas S Cullen, Maryland, and unanimously carried by rising vote

Supplementary Report of the Council on Scientific Assembly

The secretary presented a supplementary report from the Council on Scientific Assembly, which, on motion duly seconded and carried, was adopted

Your Council on Scientific Assembly offers this as a supplementary report and recommends that in place of combining Gastro-Enterology and Proctology with Stomatology, the latter section be reconstituted, and that a Section on Gastro-Enterology and Proctology be established This will not increase the number of sections, since the Section on Hospitals has now been discontinued

Respectfully submitted

J Shelton Horsley,
A R Craig,
G H Simmons

The secretary asked unanimous consent, which was granted, and presented a resolution from the Section on Preventive Medicine and Public Health, with the request that this communication be referred to the Council on Health and Public Instruction

On motion, duly seconded and carried, the communication was so referred

The resolution is as follows

Resolved, That the Section on Preventive Medicine and Public Health recommends to the House of Delegates that the Council on Health and Public Instruction be instructed to consider the question of a Public Health Exhibit in connection with the next annual session

The secretary, with the unanimous consent of the House, read the following telegram addressed to the President of the Association, which, on motion duly seconded and carried, was spread on the record

There will be one Field Hospital and one Ambulance Company United States Army at Citizens Military Training Camp, Fort Benjamin Harrison, Indianapolis, Indiana, for instructing doctors and medical students in field hospital and sanitation work, four camps of fifteen days' duration each will be held, commencing with July 5, cost one dollar per day, in addition to cost of uniform Urgently recommend attendance these camps every man interested in adequate national defense Hope your Association will endorse this movement Army Surgeon at Fort Wayne Detroit will furnish circulars

William Stephenson
Colonel Medical Corps Department Surgeon

Dr John Ridlon, Illinois, delegate from the Section on Orthopedic Surgery, asked unanimous consent, which was granted, to present two communications from this section and have them referred to the proper committees These communications are as follows

The Orthopedic Section having received a communication suggesting the advisability of reducing the number of sessions as well as the number of papers of this section, adopted the following resolution, unanimously

The experience of the Orthopedic Section of the American Medical Association at both the Detroit Session and those which have gone before has shown that there is a great and growing interest in the work which it is doing It is of the highest importance to the cause of the crippled and deformed that this work be popularized

The average attendance at the Detroit session has been close to 100, the papers have without exception been of practical interest and the discussions most instructive

The Orthopedic Section, therefore, asks that no action be taken by the House of Delegates which will in any way reduce the maximum number of papers and of sessions as set forth by the rules at present in effect

The second resolution follows

Whereas, The crippled and deformed children of the nation constitute a class among whom there are many neglected, dependents and defective, only five states and a few private institutions providing at all adequate care, and

Whereas, The work that is being done in their behalf proves that from 40 to 50 per cent of them, if taken in time, may be wholly cured and made self supporting, independent citizens while an additional 25 per cent may be made self supporting, and

Whereas, *It* is estimated that there are at least 300,000 crippled children in the United States, with proper institutional provisions for less than 3,000, therefore,

This association urges that the various state superintendents of education take the proper steps to take a census of crippled and deformed children under 18 years of age, with a view to ascertaining their number in order to provide proper hospital schools for their care and conservation

Dr Arthur T McCormack, Kentucky, moved that the first communication be referred to the Council on Scientific Assembly, and the second one to the Council on Health and Public Instruction with power to act Seconded and carried

Dr B R McClellan, Ohio, asked unanimous consent, which was granted, and presented the following

The delegates to the American Medical Association from the Ohio State Medical Association were instructed at the last annual meeting in Cleveland to request the American Medical Association to refer to the Council on Health and Public Instruction a resolution requesting some action on a uniform effort for the formation of reserve surgical corps to cooperate with the medical departments of the United States Army and Navy We, therefore, present the following resolution

"That the president appoint a committee to confer with the medical departments of the United States Army and Navy to draw up a uniform plan for organizing in the various states reserve medical corps"

On motion, duly seconded and carried, the communication was received and referred as requested

It was moved that the President of the Association be authorized to appoint all committees which have been authorized at this annual session of the House, and also the chairman, vice chairman, secretary and executive committee of the new section constituted this afternoon

Seconded and carried

Dr Milton Board, Kentucky, presented the following which, on motion, duly seconded and carried, was adopted

A Note on the Death of Dr Favill to be Spread on the Minutes of the House of Delegates

The American Medical Association has suffered in the past year a serious loss by the death of Dr Henry Baird Favill Dr Favill had been chairman of the Council on Health and Public Instruction since its establishment in 1910 He was a physician who had clear insight into the significance and growing importance of the relations of the medical profession to the public In many different ways, he was responsive to the call to human service, not only for individuals but also for organizations for social betterment

Dr Favill's keen vision for things of fundamental value, his constructive idealism, which was made efficient by a large experience with men and affairs and by an ingenious practicality, his wide ranging interest in whatever might benefit mankind, his inspiring leadership and his tireless energy were nowhere else more effectively manifested than throughout his work in the Council on Health and Public Instruction

The House of Delegates of the American Medical Association hereby registers its grateful appreciation of the beneficent and lasting service to his fellow men which Dr Favill rendered by his activity both in the medical profession and in the community at large, and its feeling of poignant regret that a life so overflowing with unselfish devotion to high aims should have been so prematurely ended

The following extract from an appreciation of Dr Favill, written by Dr Lenna Meanes, chairman of the subcommittee on women's and children's welfare, and published in the *Women's Medical Journal* well shows the esteem in which Dr Favill was held by those associated with him in council work

Dr Henry Baird Favill was a man of unusual power and leadership Over and again, we have read that tribute to his memory in the weeks since his death, and the tribute has come from sources as varied as his interests were Wherever he allied himself, his keen sense of discrimination, together with his ideals of justice, compelled the immediate recognition of that power Perhaps in no other place was his

the Indians infested this part of the country Then the French came along and Pontchartrain and Cadillac founded the city of Detroit in 1701 The name Detroit is from the French *detroit*, meaning the strait, and was so called because of its situation on the narrow strait connecting Lake St Clair with Lake Erie. The history of Detroit is closely interwoven with that of the whole Northwest, which began as early as Canada and Virginia

Though "the place called Detroit" had been known to explorers for many years, it was not until the New England and New York coasts were inhabited that it began to be of any importance From the rough maps it was seen to be the easiest passage to the Mississippi Valley and Louisiana, and Cadillac, then commandant at Michilimackinac, first conceived the idea of a post at Detroit and prepared plans for a settlement. July 24 1701, he arrived with his 13-year-old son, a nephew, Surgeon Henri Belisle, Capt Alphonse de Tonty Lieutenants Dugue and Chacornacle, Father Vaillant, a Jesuit missionary, Father De L'Halle a Recollect, chaplain of the expedition, fifty soldiers and fifty Canadian traders and artisans with equipment for settling

For over 100 years after the first Frenchman came it was under the dominion of France, and during sixty years of this time, under a French governor From 1760 to 1796 it was controlled by the British The fort was commanded by English officers, and Scotch merchants began to change the character of the place After thirty-six years of English rule the American flag floated over the fort and the New England influence came The importance of the post brought as commanders the most noted officers, and some of the leading eastern families made Detroit their home Again in 1812, the English flag waved over the fort for thirteen months to be replaced by the stars and stripes after Perry's victory in the Battle of Lake Erie

We were born of romance of war and fire, and out of that has come the splendid citizenship such as you see today The class of people here are rugged and hearty, brave and courageous, until I think we now have what we may call a wonderful city You may think that we are only an automobile city Well that is true because Detroit makes more automobiles than any city in the world We were on a solid financial basis long before the automobile came We lead the world in many manufacturing products, like stoves, and in pharmaceutical preparations we are second to none in the world

We have the vast factories which I hope, you will be delighted with and take great pleasure in going through and seeing how automobiles are turned out, one every minute starting at the beginning with nothing at all, and passing along down to the end of the factory until you see the men turn out a complete automobile that runs under its own power These vast factories are controlled by men that are strong and sturdy because no industry, my friends, can be greater than its source It cannot be greater than what is behind it namely the men and unless these men are people of character people of integrity people of broad spirit and great souls that industry is bound to fail absolutely

I am personally acquainted with all the gasoline kings of Detroit and I am glad to say to you that they are men of the highest integrity men who are looking and working for the betterment of the world because they do not look on the men who stand at the machinery and do the work as their serfs and slaves but they look on them as their fellow men—men who deserve and are receiving an honest living wage in order that they may live and grow up not as slaves but as good American citizens They are paid enough money so that they can dress their wives and children in proper style and be self-respecting The children are sent to school and are taught the constitution of Michigan and the constitution of the United States They teach them the English language and these children grow up to honor and respect the government, the law and the flag under which they live (Applause.) Now my friends, that is true citizenship That is preparedness which the governor talked about because you are making fundamentally stalwart men—men who not only become first class citizens but also self-respecting, moral healthy people All this is being done by the manufacturers here in the city of Detroit and they are well worthy of the progress and of all the success they have attained I want you to go among them I want you to enjoy yourselves Leave dull care at home Do not think about the patients you have left at home sick in bed They will all get well while you are away (Laughter) Give them a chance. Do not worry about them because it is human nature if you have fixed them all right for them to think they will be all right You give them advice how to live and how to keep their health, but they will go right straight back and do the very things that you told them not to do, and you will be on the job and you will not lose a cent (Laughter)

The working men of this city, after being in hot places during the week in the factories, working hard, on Saturday and Sunday with their wives and children, take their little baskets and go to the parks where they can all enjoy themselves to their hearts' content For that reason, this is one of the greatest labor markets in the world We very rarely have any trouble with labor of any kind in this city, especially any trouble with honest labor Once in a while, an agitator thinks he has got to do something

The mayor told me to tell you that he had instructed the police department not to interfere with anything you do He said that boys will be boys, and that when they get away from home and have a good time, they are too level-headed to do anything which is indiscreet.

My friends members of the American Medical Association, I thrice welcome you to the beautiful city of Detroit and I hope you will enjoy yourselves immensely (Loud applause)

ADDRESS OF WELCOME BY PRESIDENT OF THE MICHIGAN STATE MEDICAL SOCIETY

Dr A. W Hornbogen, president of the Michigan State Medical Society, delivered the following address

Mr President, Fellow Members of the American Medical Association Ladies and Gentlemen I esteem it an honor that it has fallen to me as president of the Michigan State Medical Society, to welcome you to this city

Sixty years ago, in 1856, you met for the first time on Michigan soil Your president, on that occasion, was Dr Zina Pitcher of Detroit It is not probable that any member here present was in attendance at that meeting

Eighteen years later, you honored our state with your presence, Detroit was again chosen as the place of meeting, and Dr Joseph Toner of Washington, D C, was your president.

In 1892 Detroit was once more your meeting place, and Dr Henry O Marcy of Boston, one of the renowned surgeons of his day, was your presiding officer

Twenty-four years have elapsed since your last visit, and I can assure you that after the close of this meeting, you, as members of the various state medical societies, remembering with gladness the royal welcome and entertainment tendered you by the medical men of Wayne County will not forget to instruct your delegates to the American Medical Association not to have a quarter of a century elapse before coming to see us again

We, the members of the Michigan State Medical Society, as proud citizens of one of the fairest states in the Union, and as brothers of a common profession, extend to you a most hearty welcome (Applause)

In closing, I wish to refer briefly to the herculean work accomplished by one of the members of our state medical society, Dr Beverly D Harison He has probably done more for the medical profession in the United States, and the people of this country, than almost any other man present today When you stop to consider that in June, 1901 the National Confederation of Medical Examining and Licensing Boards passed a resolution that medical reciprocity was an impossible proposition you will find that in spite of all the pessimistic forecasts Dr Harison, at the instigation of the Michigan State Board of Registration, commenced in the same year his arduous work, which led in January, 1902, to the foundation of the American Federation of Reciprocating, Examining and Licensing Medical Boards in Chicago

This federation from the membership standpoint was certainly a small one, but it has grown until now it is responsible for the present status of reciprocity throughout the United States and includes four fifths of the states of the Union (Applause.)

Dr Vander Veer, in introducing and installing the President, Dr Rupert Blue, said Faithful in all things, successful in every mission given to him by this great United States government, I take great pleasure in introducing to you Dr Rupert Blue, Surgeon-General of the United States Public Health Service, as your President (Applause)

President Blue then delivered his address, on Some of the Larger Problems of the Medical Profession,' which was published in The Journal, June 17, 1916 p 1899

Adjourned

MINUTES OF THE SECTIONS

SECTION ON PRACTICE OF MEDICINE

First Day, June 13—Afternoon

The meeting was called to order by the chairman, Dr Roger S Morris, Cincinnati

Dr C F Hoover, Cleveland, was appointed on the Executive Committee in the absence of Dr Charles Lyman Greene, St Paul

Dr Walter V Brem, Los Angeles, read a paper on "Blood Transfusion, With Special Reference to Blood Grouping" Discussed by Drs Richard Lewisohn, New York, George R Minot, Boston, F G Novy, Ann Arbor, Mich, A Jacobi, New York, and Walter V Brem, Los Angeles

Drs Henry Sewall, William C Mitchell and Cuthbert Powell, Denver, presented a paper on "Preliminary Observations on the Apparently Immunizing Behavior of the Mixed Serums of Immune and Hypersensitive Guinea-Pigs" Discussed by Drs F G Novy, Ann Arbor, Mich, Samuel J Meltzer, New York, and Henry Sewall, Denver

Dr Downey L Harris, St Louis, read a paper on "Comparative Results in Antirabic Treatment with the Pasteur Method and with Desiccated Virus" Discussed by Drs Samuel J Meltzer, New York, William W Tompkins, Charleston, W Va, and Robert A Peers, Colfax, Calif

Wednesday, June 14—Morning

The following were appointed as a nominating committee Drs Nellis B Foster, New York, Lawrence Litchfield, Pittsburgh, and Walter V Brem, Los Angeles

The following papers were read as a symposium on "Tests for Renal Function"

Dr Nellis B Foster, New York "A Consideration of Types of Uremia"

Drs Arthur F Chace, New York, and Victor C Myers, Albany, N Y "The Value of Recent Laboratory Tests in the Diagnosis and Treatment of Nephritis, with Special Reference to the Chemical Examination of the Blood"

Drs Herman O Mosenthal and D Sclater Lewis, Baltimore "A Comparative Study of Tests for Renal Function"

These three papers were discussed by Drs Henry A Christian, Boston, Samuel J Meltzer, New York, L F Barker, Baltimore, A W Hewlett, Ann Arbor, Mich, H J Lehnhoff, Lincoln, Neb, Nellis B Foster, New York, Arthur F Chace, New York, and Herman O Mosenthal, Baltimore

Dr Edward C Rosenow, Rochester, Minn, read a paper on "Lesions of the Nervous System Following Intravenous Injection of Bacteria" Discussed by Drs Frank Billings, Chicago, Ernest Zueblin, Baltimore, Samuel J Meltzer, New York, G Canby Robinson, St Louis, Henry A Christian, Boston, and Edward C Rosenow, Rochester, Minn

Dr Samuel Robinson, Rochester, Minn, read a paper on 'Thoracic Disease—The Status of Surgical Therapy" Discussed by Drs Willy Meyer, New York, F T Lord, Boston, Samuel J Meltzer, New York, and Samuel Robinson, Rochester, Minn

Wednesday, June 14—Afternoon

A joint meeting was held with the Section on Surgery, General and Abdominal For a report of the proceedings, see the minutes of that section

Thursday, June 15—Morning

The following officers were elected chairman, Dr Henry A Christian, Boston, vice chairman, Dr Douglas Vanderhoof, Richmond, Va, secretary, Dr James S McLester, Birmingham, Ala, delegate, Dr Samuel J Meltzer, New York, alternate, Dr Herbert C Moffitt, San Francisco

Drs Thomas McCrae and Elmer H Funk, Philadelphia, presented a paper on "Localized Bronchiectasis Involving the Upper Portions of the Lung, with Report of Four Cases (Necropsy)" Discussed by Drs F T Lord, Boston, Thomas McCrae, Philadelphia, and Elmer H Funk, Philadelphia

Dr John E Greiwe, Cincinnati, read a paper on "Premature Ventricular Systoles and Their Clinical Significance" Discussed by Dr Charles F Hoover, Cleveland, and Walter J Wilson, Detroit

The following papers were read as a symposium on "Disturbances of Cardiac Mechanism"

Dr Albion W Hewlett, Ann Arbor, Mich "The Significance of Pulse Form"

Dr G Canby Robinson, St Louis "The Relation of Changes in the Form of the Electrocardiogram to Functional Derangements of the Heart Muscle"

Dr Francis W Peabody, Boston "Some Factors in the Production of Cardiac Dyspnea"

Dr Augustus W Crane, Kalamazoo, Mich "Roentgenograms Polygraphic Strip Tracings of Heart Chambers by the Roentgen Ray"

These four papers were discussed by Drs Frank N Wilson, Ann Arbor, Mich, S Marx White, Minneapolis, Philip S Roy, Washington, D C, Hugo A Freund, Detroit, F T Lord, Boston, Albion W Hewlett, Ann Arbor, Mich, and John E Greiwe, Cincinnati

Drs Walter Hamburger, Harry Ginsburg and Isadore Tumpowsky, Chicago, presented a paper on "Mechanism of Hunger Pain in Chronic Ulcer" No discussion

Dr Willard J Stone, Toledo, Ohio, read a paper on "Further Experiences with Carbohydrate Restriction in the Treatment of Hyperchlorhydria and Ulcer" Discussed by Drs Samuel J Meltzer, New York, M H Fussell, Philadelphia, Anthony Bassler, New York, J W Draper, New York, Isadore Tumpowsky, Chicago, and Willard J Stone, Toledo

Dr Cabot Lull, Birmingham, Ala, read a paper on "Syphilis as a Probable Factor in Vague Stomach Disorders" No discussion

Dr H L McNeil, Galveston, Texas, read a paper on "Syphilis in the Southern Negro as Determined by One Thousand Wassermann and Luetin Reactions Done on Hospital Patients" Discussed by Drs Frank Smithies, Chicago, and Fenton B Turck, New York.

SECTION ON SURGERY, GENERAL AND ABDOMINAL

Tuesday, June 13—Afternoon

The meeting was called to order at 2 05 by the chairman, Dr E Wyllys Andrews, Chicago

Dr Andrews then read the chairman's address, entitled "The Relation of Practical Surgery to the Pure Sciences" No discussion

Dr George W Crile, Cleveland, read a paper on "Practical Results of Newer Methods in Surgery of the Stomach and Intestines" Discussed by Drs A J Ochsner, Chicago, R C Coffey, Portland, Ore, Henry O Marcy, Boston, John B Deaver, Philadelphia, Alfred A Strauss, Chicago, and G W Crile, Cleveland

Dr John A Wyeth, New York, read a paper on "Some Observations on the Teaching of the Surgeon" Discussed by Drs A D Bevan, Chicago, John D Milligan, Pittsburgh, Thomas A Stoddard, Pueblo, Colo, H O Marcy, Boston, and John A Wyeth, New York

Dr A Bennett Cooke, Los Angeles, read a paper on "Nitrous Oxid-Oxygen Anesthesia in Major Surgery" Discussed by Drs W I Terry, San Francisco, L M Gaines, Atlanta, Ga, and Mr C K Teter, Cleveland

Dr Charles N Dowd, New York, read a paper on "Tuberculosis of the Cervical Lymphatics" Discussed by Drs John F Golden, Chicago, Robert T Morris, New York, W L Ladd, Boston, Willy Meyer, New York, and C N Dowd, New York.

Dr Emil G Beck, Chicago, read a paper on "Incorrect Technic as a Cause of Failure in the Application of Bismuth Paste in Chronic Suppurative Sinuses and Empyema" Discussed by Drs A. J Ochsner, Chicago, and Emil G Beck, Chicago

Wednesday, June 14—Morning

Dr C A Elsberg New York, read a paper on "Some Technical Features of Spinal Surgery, with Report of Results in 150 Spinal Operations" Discussed by Drs E Sachs, St Louis, and C A Elsberg, New York

Dr Arthur A. Law, Minneapolis, read a paper on 'Surgery of the Brachial Plexus" Discussed by Drs Dean D Lewis, Chicago, and Arthur A Law, Minneapolis

Dr Carl B Davis, Chicago, read a paper on "Free Transplantation of the Omentum Subcutaneously and Within the Abdomen' Discussed by Drs Alfred A Strauss, Chicago, John Staige Davis, Baltimore and A T Mann, Minneapolis

Dr J Shelton Horsley, Richmond, Va, read a paper on Operative Treatment for Threatened Gangrene of the Foot, with Special Reference to Reversal of the Circulation" Discussed by Drs Dewitt Stetten, New York, Charles Goodman, New York, Nathaniel Ginsburg, Philadelphia, Carl Beck, Chicago, G M. Dorrance Philadelphia, E Laplace Philadelphia, *J F Corbett, Minneapolis, and J Shelton Horsley,* Richmond, Va.

Dr Charles C Green, Houston, Texas, read a paper on "Stab Wounds of the Chest Involving the Diaphragm with Diaphragmatic Hernia." Discussed by Drs J E. Moore, Minneapolis, and Charles C Green, Houston, Texas

Wednesday, June 15—Afternoon

A joint meeting was held with the Section on Practice of Medicine

The meeting was called to order by Dr Roger S Morris Cincinnati

The following papers were read as a symposium on the Spleen."

Dr George R Minot, Boston, and Dr Roger I Lee, Boston 'The Immediate Effects of Splenectomy in Pernicious Anemia"

Dr E. B Krumbhaar, Philadelphia "Late Results of Splenectomy in Pernicious Anemia'

Dr Joseph L Miller Chicago "Splenectomy in Chronic Anemia, Exclusive of Pernicious Anemia, and in Chronic Icterus"

Dr Charles H Peck, New York "Splenectomy for Hemolytic Jaundice"

Dr Donald C Balfour, Rochester, Minn 'Indications for Splenectomy in Pernicious Anemia and the Technic of the Operation"

Dr Roy D McClure, Baltimore "Pernicious Anemia Treated by Splenectomy and Often-Repeated Blood Transfusions"

These six papers were discussed by Drs Frank Smithies, Chicago, Beth Vincent, Boston H Z Giffin, Rochester, Minn, W S Thayer, Baltimore, G A Friedman New York, S J Meltzer, New York, Walter V Brem Los Angeles, Roger I Lee Boston, Edward B Krumbhaar, Philadelphia, and Joseph L. Miller, Chicago

Thursday, June 15—Morning

The meeting was called to order at 9 15 by the vice chairman Dr Fred T Murphy, St Louis

The following officers were elected chairman, Dr W D Haggard Nashville, Tenn, vice chairman Dr A. A. Law, Minneapolis, secretary Dr E H Pool, New York, delegate Dr Dean D Lewis, Chicago, alternate, Dr John T Bottomley Boston

Dr Charles H Mayo, Rochester Minn read a paper on Removal of the Right Colon Indications and Technic."

Dr John T Bottomley, Boston read a paper on 'Some Results of Colectomy and Exclusion of the Colon in Cases of Chronic Arthritis '

These two papers were discussed by Drs Rea E. Smith, Los Angeles, W R. MacAusland Boston, J M Lynch, New York, J E Tuckerman, Cleveland, J Shelton Horsley, Richmond Va, J W *Draper New York, Joseph E.* Johnson, Memphis Tenn, and Charles H Mayo, Rochester Minn

Dr Raymond P A. Sullivan, Brooklyn read a paper on 'Perforating Ulcers of the Stomach and Duodenum Discussed by Drs Charles H Peck, New York J T Bottomley, Boston, H D Johnson, New York, and R P A Sullivan, Brooklyn

Dr John Staige Davis, Baltimore, read a paper on "Plastic and Reconstructive Surgery" Discussed by Drs Emery Marvel, Atlantic City, N J, and J S Stone, Boston

Dr W W Grant, Denver, read a paper on "Sarcoma of Intra-Abdominal Testicle" Discussed by Drs William B Coley New York, and W W Grant, Denver

Dr F Gregory Connell, Oshkosh, Wis, read a paper on "Chronic Appendicitis" Discussed by Drs J A Black, Pueblo Colo, E Laplace, Philadelphia, and M H Fussell, Philadelphia

Thursday, June 15—Afternoon

The meeting was called to order at 2 15 by the chairman, Dr E Wyllys Andrews, Chicago

Dr Emmet Rixford, San Francisco, delivered the oration on surgery, entitled "Surgical Aspects of the Industrial Accident Insurance" No discussion

Dr Lincoln Davis, Boston, read a paper on "Complications and Sequelae of the Operation for Inguinal Hernia" Discussed by Drs Henry O Marcy, Boston, Daniel N Eisendrath Chicago, Edward W Lee, New York, and Lincoln Davis Boston

Dr R. L Payne, Jr., Norfolk, Va., read a paper on "The Surgical Problem of Symptomless Hematuria Its Causes and Surgical Relief" Discussed by Drs H A Royster, Raleigh N C, J S Horsley, Richmond, Va, and R. L Payne, Jr Norfolk, Va

Dr A. R. MacAusland, Boston, read a paper on "A Consideration of Fractures and Other Injuries of the Hip"

Dr John C A. Gerster, New York, read a paper on "Nail Extension in Fractures of the Lower Extremity"

Dr Arthur T Mann, Minneapolis, read a paper on "Nails and Screws Through Joint Surfaces in Autografts and in Fractures Into Joints"

These three papers were discussed by Drs Charles E Thompson Scranton, Pa, R. H Sayre, New York, F H Albee New York, James T Watkins, San Francisco, W R. MacAusland, Boston, Charles A Parker, Chicago, A B Fitch, Factoryville Pa., L F Schmauss, Alexandria, Ind, and A. T Mann, Minneapolis

SECTION ON OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY

Tuesday, June 13—Afternoon

The meeting was called to order at 2 p m by the chairman, Dr Edward Reynolds, Boston

Dr E E Montgomery, Philadelphia, on motion, occupied the chair during the reading of the chairman s address Dr Reynolds expressed the hope that Dr Montgomery might consider discussion of the chairman s address, although such discussion was contrary to custom

Dr Edward Reynolds then presented the chairman s address, entitled 'The Uterine Secretions, Spermatozoa and Ovaries in Fertility and Sterility From Microscopic Studies" Discussed by Drs Emil Novak, Baltimore, and E Gustav Zinke, Cincinnati

Dr Reynolds then resumed the chair

Dr Emil Novak, Baltimore, read a paper on "The Corpus Luteum—Its Life Cycle and Its Role in Menstrual Disorders" Discussed by Dr Carey Culbertson, Chicago, and Dr Emil Novak, Baltimore.

Dr Henry T Hutchins, Boston read a paper on "The Role of the Anteposed Uterus in the Causation of Backache and Pelvic Symptoms.' Discussed by Drs Channing W Barrett and Albert Goldspohn, Chicago, Dr Walter P Manton Detroit, Dr E. E. Montgomery Philadelphia, Dr J H Carstens, Detroit and Dr Henry T Hutchins Boston

Drs Frederick H. Falls and Josiah J Moore, Chicago presented a paper on 'The Value of the Wassermann Test in Pregnancy," which was read by Dr Falls Discussed by Dr E. P Davis Philadelphia Dr J R. Losee New York, and Dr Frederick H Falls, Chicago

Dr Thomas S Cullen, Baltimore, read a paper on 'Adenomyoma of the Rectovaginal Septum ' Discussed by

Drs Carey Culbertson, Chicago, and Thomas S Cullen, Baltimore

Dr Frederick C Holden, Brooklyn, read a paper on "Obstetrics and Gynecology Under Ideal Conditions in a General Hospital" Discussed by Drs John Osborn Polak, Brooklyn, Charles S Bacon, Chicago, H P Newman, San Diego, Calif, and Frederick C Holden, Brooklyn

Wednesday, June 14—Morning

Drs J M Lynch and W L McFarland, New York, presented a paper on "Colonic Infections Some Seldom Described Nonspecific Types," which was read by Dr Lynch Discussed by Drs J W Draper, New York, and J M Lynch, New York

Dr Joseph Rilus Eastman, Indianapolis, read a paper on "Congenital Inflammation, Deformation and Defunctionalization of the Caudad Ileum and Colon" Discussed by Drs Albert Goldspohn, Chicago, F Gregory Connell, Oshkosh, Wis, J M Lynch, New York, J N Jackson, Kansas City, Mo, and Joseph Rilus Eastman, Indianapolis

Dr Charles A L Reed, Cincinnati, read a paper on "Anterior Parietal Implantation of the Colon for Ptosis" Discussed by Drs Franklin H Martin, Chicago, Robert T Morris, New York, Emery Marvel, Atlantic City, N J, and Charles A L Reed, Cincinnati

Dr Albert J Ochsner, Chicago, read a paper on "The Prevention of Obstruction of the Passage of Gas Following Operations on the Colon" Discussed by Drs W D Haggard, Nashville, Tenn, Charles A. L Reed, Cincinnati, and Dr Albert J Ochsner, Chicago

Dr Charles H Mayo, Rochester, Minn, presented a paper on Radical Operations for the Cure of Cancer of the Second Half of the Large Intestine" Discussed by Drs Edward Martin, Philadelphia, J M Lynch, New York, R C Coffey, Portland, Ore, J W Draper, New York, Julius H Jacobson, Toledo, Ohio, and Dr Charles H Mayo, Rochester, Minn

Wednesday, June 14—Afternoon

Dr John W Draper, New York, read a paper on "Intestinal Obstruction Further Experimental Studies" Discussed by Drs H D Johnson, New York, C Hugh McKenna, Chicago, and John W Draper, New York

Dr John Young Brown, St Louis, read a paper on "The Superiority of the Right Side Anus in the Handling of Partial and Complete Obstructions of the Lower Colon and Sigmoid in Cases Unsuited for Radical Operation" Discussed by Drs J M Lynch, New York, J Shelton Horsley, Richmond, Va, and John Young Brown, St Louis

Dr Thomas J Watkins, Chicago, read a paper on "Pelvic Infection in Women, Notes on Some Features of the Disease" Discussed by Drs E P Davis, Philadelphia, Thomas S Cullen, Baltimore, F F Lawrence, Columbus, Ohio, James C McMechan, Cincinnati, J H Carstens, Detroit, Channing W Barrett, Chicago, John B Deaver, Philadelphia, and Thomas J Watkins, Chicago

Dr John G Clark and Dr Charles C Norris, Philadelphia, presented a paper on "Results Following the Treatment of Pelvic Inflammatory Lesions By Surgical Measures," which was read by Dr Clark Discussed by Dr L S McMurtry, Louisville, Ky, E W Lee, New York, R C Coffey, Portland, Ore, Gordon G Copeland, Toronto, Albert Goldspohn, Chicago, and John G Clark, Philadelphia

Thursday, June 15—Morning

The following officers were nominated and elected chairman, Dr H W Longyear, Detroit, secretary, Brooke M Anspach, Philadelphia, delegate, Horace G Wetherill, Denver, alternate, Thomas S Cullen, Baltimore

Dr Gustav E Zinke, Cincinnati, read a paper on "The External Signs of Diagnosis of the Attitude of the Fetus in Utero" Discussed by Drs Walter P Manton, Detroit, John Osborn Polak, Brooklyn, Rachelle S Yarros, Chicago, and Gustav A Zinke, Cincinnati

Dr James W Markoe, New York, read a paper on "Posture in Obstetrics" Discussed by Drs Rudolph W Holmes, Chicago, Charles S Bacon, Chicago, E W Lee, New York, E P Davis, Philadelphia, Gustav A Zinke, Cincinnati, and James W Markoe, New York

Dr Isadore L. Hill, New York, read a paper on "The Use of Chloroform in the First Stages of Labor" Discussed by Drs C H Davis, Chicago, Joseph B De Lee, Chicago, John Osborn Polak, Brooklyn, Gustav A. Zinke, Cincinnati, J H Carstens, Detroit, Walter P Manton, Detroit, H O Marcy, Boston, C W Simpson, Waxahachie, Texas, Chester R Ogden, Clarksburg, W Va, Gordon G Copeland, Toronto, and Isadore L Hill, New York

Dr Edward P Davis, Philadelphia, read a paper on "Obstetric Surgery, A Modern Science, Its Scope and Limitations" Discussed by Drs Charles S Bacon, Chicago, Rudolph W Holmes, Chicago, Gustav A Zinke, Cincinnati, and John Osborn Polak, Brooklyn

With the consent of the section, the chairman announced that he would ask Dr De Lee of Chicago to read his paper and that the discussion might be continued to include the two papers

Dr Joseph B De Lee, Chicago, read a paper on "Meddlesome Midwifery in Renaissance," and the discussion was continued by Drs A. J Rongy, New York, Edward P Davis, Philadelphia, and Joseph B De Lee, Chicago

Thursday, June 15—Afternoon

Dr Walter Lathrop, Hazleton, Pa, read a paper on "Umbilical Hernia and Lipectomy" Discussed by Drs W Wayne Babcock, Philadelphia, Henry O Marcy, Boston, and Walter Lathrop, Hazleton, Pa

Dr John W Keefe, Providence, R I, read a paper on "Sheet Rubber Superior to Gauze Sponges in Abdominal Operation" Discussed by Drs Richard R Smith, Grand Rapids, Mich, C H Magee, Burlington, Iowa, S C Stremmel, Macomb, Ill, Stephen E Tracy, Philadelphia, F F Lawrence, Columbus, Ohio, John J Reycraft, Petoskey, Mich, and John W Keefe, Providence, R. I

Dr Donald Guthrie, Sayre, Pa, read a paper on "Indications for Cholecystectomy" Discussed by Drs John B Deaver, Philadelphia, H S Noble, St. Marys, Ohio, and F F Lawrence, Columbus, Ohio

Dr Stephen E Tracy, Philadelphia, read a paper on "A Report on One Hundred Consecutive Cases of Fibromyomata Uteri Subjected to Operation"

Dr John B Deaver, Philadelphia, read a paper on "Operative Treatment of Fibromyomatous Uterine Tumors"

Dr Julius H Jacobson, Toledo, Ohio, read a paper on "Recent Progress in the Surgical Treatment of Uterine Cancer" These three papers were discussed by Drs Henry T Byford, Chicago, J H Carstens, Detroit, Henry Schmitz, Chicago, F F Lawrence, Columbus, Ohio, E. W Lee, New York, C M Echols, Milwaukee, Wis, Stephen A Tracy, Philadelphia, John B Deaver, Philadelphia, and Julius H Jacobson, Toledo, Ohio

SECTION ON OPHTHALMOLOGY

Tuesday, June 13—Afternoon

The meeting was called to order at 2 o'clock, by the chairman, Dr Walter R Parker, Detroit

Dr Walter R Parker, Detroit, read the chairman's address, entitled "The Relation of Choked Disk to the Tension of the Eyeball in Brain Tumor Cases" Discussed by Drs James Bordley, Jr, Baltimore, and John E Weeks, New York

Dr Mark J Schoenberg, New York, read a paper on "Intracranial Treatment of Syphilitic and Parasyphilitic Optic Nerve Affections, Physiologic Evidences Researches on Intravital Staining of the Optic Nerve" Discussed by Dr Udo J Wile, Ann Arbor, Mich, James B Ayer, Jr., Boston, J S Wyler, Cincinnati, George S Derby, Boston, and Mark J Schoenberg, New York.

Dr Cassius D Wescott, Chicago, read a paper on "A Case of Granuloma Pyogenicum Affecting the Eyelid" Discussed by Drs Lee Masten Francis, Buffalo, Udo J Wile, Ann Arbor, Mich, John E Weeks, New York, Harold Gifford, Omaha, Edward Jackson, Denver, and Cassius D Wescott, Chicago

Dr George Slocum, Ann Arbor, Mich , read a paper on "A Study of Ophthalmoscopic Changes in Nephritis" Discussed by Drs A. E. Bulson, Jr, Fort Wayne, Ind , E. E Blaauw Buffalo, E J Bernstein, Kalamazoo, Mich , George E de Schweinitz, Philadelphia, S D Risley, Philadelphia, Edward Jackson, Denver, Walter R Parker, Detroit, and George Slocum, Ann Arbor, Mich

Dr William L. Clark, Philadelphia, read a paper on The Uses of the Desiccation Method in Ophthalmology, with Special Reference to Epithelioma of Lids, Canthi and Conjunctiva Report of Cases" with lantern demonstration Discussed by Drs S Lewis Ziegler, Philadelphia, W C Posey, Philadelphia, and by William L Clark, Philadelphia

Wednesday, June 14—Morning

The following cases and new instruments were presented

Dr G M Waldeck, Detroit, presented a child with blue sclerotics who was subject to spontaneous fractures

Dr Lucien Howe, Buffalo, exhibited an instrument involving thermocouples for measuring the temperature of the eye

Dr E. J Bissell, Rochester, N Y, presented an instrument for a two-point fixation test for campimetry

D J E. Jennings, St Louis presented his latest modification of his skein colorblindness test

Dr G C. Savage Nashville, Tenn, presented an improvement on Dr Vard H Hulen's vacuum cup for use in extraction of the cataractous lens in its capsule. Discussed by Drs G C Savage, Nashville, Tenn., and Vard H Hulen, San Francisco

Dr Mark J Schoenberg, New York, exhibited some specimens demonstrating the permeability of the optic nerve and its sheath by substances injected into the spinal canal and intraventricularly

Dr H S Gradle Chicago, in discussing Dr Schoenberg's specimens, suggested that the optic nerve might be reached by injections into the nasal and accessory sinuses, and described the anatomy of the parts

Dr Walter R. Parker Detroit, exhibited a monkey in which a brain tumor had been induced by the introduction of a foreign substance under the dura producing a swelling of the disk After a month the swelling was shown to be subsiding, although the foreign substance was still within the cavity

Dr H. S Gradle, Chicago, read a paper on "A New Instrument for the Clinical Measurement of Dark Adaptation" Discussed by Drs E A. Willis, Indianapolis, and Walter B Lancaster, Boston

Dr Lucien Howe, Buffalo read a paper on "The Fatigue of Accommodation as Registered by the Ergograph" Discussed by Drs Hiram Woods, Baltimore, G C Savage, Nashville, Tenn , Walter B Lancaster, Boston, E E Blaauw, Buffalo, George H. Price, Nashville, Tenn, and Lucien Howe, Buffalo

Dr Edward C Ellett, Memphis Tenn., read a paper on "A Primary Intradural Tumor of the Optic Nerve Removal with Preservation of the Ball" Discussed by Drs G E. de Schweinitz, Philadelphia, and Arnold Knapp New York

Dr Harold Gifford Omaha, read a paper on "Homatropin Glaucoma Its Occurrence and Prevention" Discussed by Drs Eugene Smith, Detroit, Charles H May, New York, W W Kahn Detroit John Green, St Louis, A. G Bennett, Buffalo, Hiram Woods Baltimore, A E. Bulson Jr, Fort Wayne, Ind , E E Blaauw, Buffalo, John E. Weeks, New York, W H Wilder, Chicago, Frederick Frisch, Atlantic City, N J , J W Charles, St. Louis, and Harold Gifford, Omaha.

Dr S D Risley, Philadelphia, moved that the executive committee or the committee on publication be instructed to confer with the author of the paper with a view to changing the title

The author consented to a change in the title, and the motion, though seconded, was not voted on.

Dr William Zentmayer, Philadelphia, read a paper on 'Traumatic Pulsating Exophthalmos ' Discussed by Drs Frank E. Burch, St Paul, W H. Wilder, Chicago, M. H Lebensohn Chicago, Harold Gifford, Omaha, T B Holloway, Philadelphia, and William Zentmayer, Philadelphia.

Wednesday, June 14—Afternoon

Dr Will Walter, Chicago, read a paper on "The Etiology of Nonparalytic Ocular Imbalance Some Original Conceptions and Interpretations Based on the Physiology and Psychology of Ocular Movements" Discussed by Drs G C Savage, Nashville Tenn , George H Price, Nashville, Tenn , Wendell Reber, Philadelphia, and Will Walter, Chicago

Dr Wendell Reber, Philadelphia, read a paper on 'Heterophoria in Children" Discussed by Dr George H. Price, Nashville Tenn , A E Bulson, Jr, Fort. Wayne, Ind , G C Savage, Nashville, Tenn, and Wendell Reber, Philadelphia

Dr F C Todd Minneapolis read a paper on "Strabismus Produced by Operations for Strabismus A Consideration of Causes Producing Deformities Following Strabismus Operations, with Suggestions for Corrective Operative Procedure'

Dr Roderic P O'Connor, Oakland, Calif, read a paper on "A New Shortening Technic, with Report of Forty-Two Operations"

These two papers were discussed by Drs H W Woodruff, Joliet, Ill , W C Posey, Philadelphia, Oscar Dodd, Chicago, Lucien Howe, Buffalo, G C. Savage, Nashville, Tenn , Will Walter Chicago, Wendell Reber, Philadelphia, F C Todd, Minneapolis, and Roderic P O'Connor, Oakland, Calif

At the close of the scientific program, Dr Aaron Samuel Green San Francisco, presented some moving pictures of India of Colonel Smith operating for cataract by his method, and some other operations showing the removal of the cataract in capsule according to the Smith method.

Thursday, June 15—Morning

Dr C H Williams, Boston, chairman, read the report of the Committee on Color Vision Discussed by Drs F Park Lewis, Buffalo Walter R Parker, Detroit, and Nelson M Black, Milwaukee, Wis

Dr Walter R. Parker, Detroit, moved that the last paragraph of the report which recommends the use of additional field tests for enginemen be eliminated Motion carried

Dr F C Todd, Minneapolis, moved the adoption of the report as amended, and the discharge of the committee. Motion carried

Dr Edward Jackson, Denver, chairman read the report of the committee on Standardizing Test Cards for Visual Acuity Discussed by C H Williams, Boston, and Edward Jackson, Denver

On motion the report was adopted, to be printed in the transactions, and the committee continued

Dr Walter R Parker, Detroit, chairman, read the report of the Committee on Elliot Trephining Operation

On motion the report was accepted and the committee continued

Dr Lucien Howe, Buffalo, chairman, read the report of the Committee on Collective Investigation of the Ocular Muscles

On motion the report was accepted and the committee continued

Dr A E. Bulson, Jr, Fort Wayne, Ind, chairman, read the report of the Committee on Knapp Testimonial Fund Discussed by Edward Jackson, Denver, and Casey A. Wood, Chicago Dr Jackson moved the acceptance of the report for publication in the transactions Motion carried

Dr George E. de Schweinitz, Philadelphia chairman read the report of the Committee on Award of the Knapp Medal It was moved and seconded that the report of the committee be accepted and the medal awarded in accordance therewith to Dr George S. Derby Boston The motion carried, and Dr A E Bulson Jr Fort Wayne, Ind of the Committee on Knapp Testimonial Fund, presented the medal

The report concerning a board on education in ophthalmology was summarized by Dr Edward Jackson, Denver

Dr George E de Schweinitz Philadelphia, moved that the report be adopted and published The motion was seconded On objection by Dr George H Price, Nashville Tenn, that the report could not be adopted without being passed on by the section, but that it could be accepted for publication, Dr de Schweinitz withdrew his motion Dr Edward Jackson explained that the report was the work of three different organizations and not of the Section on Ophthalmology alone, and was for the purpose of informing the section what had been done It was not necessary for the section to adopt the report

Dr de Schweinitz then moved the acceptance of the report for publication This motion carried

Dr Hiram Woods, Baltimore, chairman, presented the report of the Executive Committee on Nomination for officers of the section and one member of the examining board, Dr E C Ellett's term having expired, as follows chairman, Dr William Zentmayer, Philadelphia, vice chairman, Dr Cassius D Westcott, Chicago, secretary for the term of three years, Dr George S Derby, Boston, representative of the section in the House of Delegates, Dr F Phinizy Calhoun, Atlanta, Ga, member of the Board on Ophthalmic Examinations, Dr E C Ellett, Memphis, Tenn

Dr Woods explained that the last was not unanimous, but that Dr Todd and he thought it was important to keep Dr Ellett on the committee

On motion of Dr Edward Jackson, duly seconded, the chairman of the section was directed to cast the ballot of the section for all of the officers named, which was done

Nominations were called for the Committee on Award of the Knapp Medal, and the following were nominated Dr John E Weeks, New York, Dr Charles H May, New York, Dr George E de Schweinitz, Philadelphia, and Dr William C Posey, Philadelphia

Dr de Schweinitz withdrew his name, and the nominations having on motion been closed, it was moved by Dr A E Bulson that the other three men named be elected as members of the Committee on Award of the Knapp Medal Motion carried

Dr Walter B Lancaster, Boston, read a paper on "The Preparation of the Patient for Operation" Discussed by Drs W H Wilder, Chicago, W H Snyder, Toledo, Ohio, H S Gradle, Chicago, M C Rose, New York, J A Donovan, Butte, Mont, Aaron Samuel Green, San Francisco, Wendell Reber, Philadelphia, C W Hawley, Chicago, Lee M Francis, Buffalo, M Feingold, New Orleans, and Walter B Lancaster, Boston

Dr William E Shahan, St Louis, read a paper on "Effects of Heat on the Eye" Discussed by Drs Thomas B Holloway, Philadelphia, John Green, St Louis, Lucien Howe, Buffalo, and William E Shahan, St Louis

Dr Marcus Feingold, New Orleans, read a paper on "Progressive Macular Degeneration in Three Members of a Family" Discussed by Drs J E Weeks, New York, Lucien Howe, Buffalo, and M Feingold, New Orleans

Thursday, June 15—Afternoon

Dr Casey A Wood, Chicago, gave a lantern demonstration on "A Comparative Study of the Fundus Oculi, Especially in Birds" No discussion

Dr Arnold Knapp, New York, read a paper on "Retinal Detachment in Hydrophthalmia" Discussed by Drs Don M Campbell, Detroit, and T B Holloway, Philadelphia

Dr Edward Jackson, Denver, read a paper on "Discission of the Crystalline Lens"

Dr William Evans Bruner, Cleveland, read a paper on "Preliminary Capsulotomy in Immature Cataract"

These two papers were discussed by Drs W E Gamble, Chicago, L M Francis, Buffalo, H Gifford, Omaha, S D Risley, Philadelphia, J G Dorsey, Wichita, Kan, D C Louchery, Clarksburg, W Va, E J Bissell, Rochester, N Y, C W Hawley, Chicago, Mary Buchanan, Philadelphia, G C Savage, Nashville, Tenn, Edward Jackson, Denver, and W E Bruner, Cleveland

The retiring chairman, Dr W R Parker, thanked all who had contributed to the success of the meeting

The chairman-elect, Dr William Zentmayer, was inducted into office

Dr S D Risley, Philadelphia, moved a rising vote of thanks to the retiring chairman

SECTION ON LARYNGOLOGY, OTOLOGY AND RHINOLOGY

Tuesday, June 13—Afternoon

The meeting was called to order at 2 o'clock by the chairman, Dr Hill Hastings, Los Angeles

Dr Hastings read the chairman's address, entitled "Purulent Infections of the Ear, Nose and Throat Our Responsibility to the Public"

Dr Chester C Cott, Buffalo, read a paper on "Xanthosis and Causes of Septal Bleeding" Discussed by Drs Emil Mayer, New York, Henry B Hitz, Milwaukee, George F Cott, Buffalo, Cullen F Welty, San Francisco, C M Brown, Buffalo, and Chester C Cott, Buffalo

Dr James J King read a paper by himself and Dr John J Conellan, New York, on "Further Observations on the Connellan-King Diplococci Throat Infections and Their Sequelae, with Especial Reference to Arthritis" with lantern demonstration Discussed by Drs John J Connellan, New York, Emil Mayer, New York, Virgil P Gibney, New York, Isaac H Jones, Philadelphia, George F Cott, Buffalo, and James J King, New York

Dr Thomas E Carmody, Denver, read a paper on "Cleft Palate and Hare Lip" (lantern demonstration), with presentation of a case of cleft palate by Dr Burt R Shurly, Detroit Discussed by Drs Charles H Oakman, Detroit, John F Barnhill, Indianapolis, William W Carter, New York, and Thomas E Carmody, Denver

Dr Greenfield Sluder, St Louis, read a paper on "The Method of Tonsillectomy by Means of the Alveolar Eminence of the Mandible and Guillotine" Discussed by Drs G Hudson Makuen, Philadelphia, George Paull Marquis, Chicago, W Eugene Dixon, Oklahoma City, Eugene R Lewis, Dubuque, Iowa, William W Carter, New York, John O McReynolds, Dallas, Texas, John F Barnhill, Indianapolis, Hanau W Loeb, St Louis, William S Tomlin, Indianapolis, Cullen F Welty, San Francisco, Elmer E Henderson, Chicago, Oliver Tydings, Chicago, and Greenfield Sluder, St Louis

The chairman appointed as a nominating committee Drs Robert Levy, Denver, Burt R Shurly, Detroit, and Norv H Pierce, Chicago

Wednesday, June 14—Morning

Dr Emil Mayer moved that the papers of the morning be read, that the opening discussions be given, and that further discussion be postponed until after the Barany pictures, to be shown at 11 30 Motion carried

The following papers were read as a symposium on "Chronic Suppuration of the Nasal Accessory Sinuses"

Dr Joseph C Beck, Chicago "The Evolution of the Frontal Sinus Operation, with Special Reference to the External Operation"

Dr Lee M Hurd, New York "Intranasal Surgery for Relief of Chronic Frontal Sinusitis"

Dr G E Shambaugh, Chicago "Surgery of the Ethmoid"

Dr William E Sauer, St Louis "Surgical Treatment of Chronic Suppuration of the Maxillary Sinus"

Dr Hanau W Loeb, St Louis "The Sphenoid Sinuses, a Review of the Past with Suggestions for the Future"

Dr Ross H Skillern, Philadelphia "Operations on the Sphenoid Sinuses"

Dr Samuel Iglauer, Cincinnati "Roentgenography of the Sphenoid and Ethmoid Cells by the Oblique Method (Lantern Demonstration)"

Dr George F Cott, Buffalo "Ethmoid Empyema Acute and Chronic"

These eight papers were discussed by Drs H P Mosher, Boston, Lee Cohen, Baltimore, H Y McNaught San Francisco, Francis W Alter, Toledo, Ohio, Joseph C Beck, Chicago, George F Cott, Buffalo, G E Shambaugh, Chicago, and Samuel Iglauer, Cincinnati

Wednesday, June 14—Afternoon

The following papers were read as a symposium on "Chronic Suppurative Otitis Media"

Dr George W Mackenzie, *Philadelphia* "Chronic Middle Ear Suppuration"

Dr Norval H Pierce, Chicago 'Nonoperative Treatment of Otitis Media"

Dr John F Barnhill Indianapolis "End-Results of Treatment of Otitis Media"

These three papers were discussed by Dr Francis T Emerson, Boston

At this time the Barany pictures were shown, giving tests of vestibular apparatus

Dr Emil Mayer, New York, moved that a vote of thanks be extended to Dr Isaac H Jones, Philadelphia, for presenting these pictures, and that his remarks be incorporated in the transactions of this section Motion carried

The three foregoing papers were further discussed by Drs W E Dixon, Oklahoma City, Cullen F Welty, San Francisco, Emmett L Jones, Cumberland Md, J Holinger, Chicago, A E Prince, Springfield Ill, H B Harris Dayton, Ohio, W S Tomlin Indianapolis, Charles M Robertson, Chicago, Clark W Hawley Chicago, George W Mackenzie, Philadelphia Norval H Pierce, Chicago, and Joseph C Beck, Chicago

Dr Philip D Kerrison New York, read a paper on "The Mastoid Operation of Ten Years Ago and Today Gradual Changes in Operative Methods and Technic Brief Estimate of the Advance as Measured by Practical Results" Discussed by Drs R B Canfield Ann Arbor Mich, Cullen F Welty, San Francisco, Joseph C Beck Chicago, Wendell C Phillips, New York and Philip D Kerrison New York

Dr David J Davis Chicago read a paper on "Vaccine Therapy Its Possibilities and Limitations" Discussed by Dr John A Pratt Aurora Ill

Dr George M Coates Philadelphia read a paper on "Clinical Experience with Use of Vaccines in Diseases of the Ear Nose and Throat' Discussed by Dr Daniel W Layman, Indianapolis

Thursday June 15—Morning

The meeting was called to order at 9 15 by the chairman, the first order of business being the report of the Nominating Committee This committee offered the following names for consideration chairman Dr Francis P Emerson, Boston, vice chairman Dr Greenfield Sluder St Louis, secretary Dr L W Dean Iowa City Iowa, representative in House of Delegates Dr Robert Levy, Denver, alternate, Dr Elmer L. Kenyon Chicago

Moved and carried that the report of the Nominating Committee be accepted as read and that Dr John J Kyle of Los Angeles cast the ballot of the entire section for the names read Motion carried

The report of the Committee on Teaching Oto-Laryngology, was read by Dr Robert Levy, chairman of the committee Moved and carried that the report be accepted

The chairman appointed Dr H P Mosher Boston, to fill the vacancy on this committee caused by the death of Dr Ballinger

The chairman appointed as an obituary committee Drs Joseph C Beck, Chicago and R. B Canfield Ann Arbor, Mich with instructions to report at the afternoon section

The chairman appointed Drs Ross H Skillern and G Hudson Makuen Philadelphia as a committee to frame suitable resolutions expressing the appreciation of the section for the entertainment given them by Dr Burt R. Shurly Detroit.

The following papers were read as a symposium on "Examination and Treatment of the Bronchi and Larynx"

Robert F Ridpath Philadelphia "The Possibilities and Limitations of Nonsurgical Bronchoscopic Treatment'

Robert C Lynch New Orleans "Possibilities and Limitations of Suspension Laryngoscopy"

These two papers were discussed by Dr W B Chamberlin, Cleveland

Dr Chevalier Jackson Pittsburgh read a paper on "New Solutions of Mechanical Problems of Foreign-Body Bronchoscopy," with lantern demonstration Discussed by Drs Thomas Hubbard, Toledo, Samuel Iglauer Cincinnati, H P Mosher Boston, Ross H Skillern Philadelphia, George F Cott Buffalo, W E Dixon Oklahoma City, George F Keiper, Lafayette, Ind Robert H Good Chicago Lee Cohen, Baltimore, J W Murphy, Cincinnati W R Butt, Carton Ohio, Robert F Ridpath, Philadelphia, and Chevalier Jackson Pittsburgh

Dr Lee Cohen Baltimore, read a paper on "Correction of External Nasal Deformities by Subcutaneous Method (Lantern Demonstration)" Discussed by Drs W W Carter, New York, Elmer L Kenyon, Chicago and Lee Cohen, Baltimore

Thursday, June 15—Afternoon

From 1 30 until 2 o'clock opportunity was given members to present instruments, etc

Dr George F Cott, Buffalo presented an instrument to prevent snoring This is an attachment to the nosepiece of eyeglasses

Dr Joseph D Heitger, Bedford, Ind, presented a modification of Beck's tonsil instrument, providing better control of the instrument

Dr Frank C Todd, Minneapolis, presented a tonsillectomy forceps which bites not up and down as the ordinary forceps, but in the other direction

Dr Albin M Painter, Youngstown Ohio, presented an arrangement of ring to steady the carrying light on the nasal pharyngoscope to be used in removing the posterior tip under direct inspection

Dr R E Mercer, Detroit, showed a tube which is used for drain in the antrum

Dr Samuel Iglauer, Cincinnati, presented a "bronchoihoscope,' a small tunnel which corresponds to the light carrier on the Jackson tube

Dr A. E Rector, Appleton, Wis, showed a frontal sinus curet

Dr Robert Sonnenschein, Chicago, showed a small flexible hearing tube

Dr Clark W Hawley, Chicago, presented an aluminum hearing fan

Dr Wendell C Phillips New York read a paper on "Clinical Types of Labyrinthitis with Comments on Treatment."

Dr Isidore Friesner, New York read a paper on "The Differential Diagnosis Between Purulent Labyrinthitis and Cerebellar Lesions"

Dr Wells P Eagleton, Newark, N J, read a paper on "The Importance of Aural Symptoms in the Early Diagnosis of Pontile Cerebellar Angle Growths (Lantern Demonstration)"

These three papers were discussed by Drs Horace Newhart Minneapolis, I H Jones Philadelphia, J Holinger, Chicago, George W Mackenzie Philadelphia, L Fisher Philadelphia, Isidore Friesner, New York, and Wells P Eagleton Newark N J

The following resolution was presented

> The Section of Otolaryngology of the American Medical Association desires to express its appreciation of the generous hospitality of *Dr Shurly and the other Detroit* members during the session, and also to express its thanks to the management of the Hotel Statler for the excellent provisions made for the scientific proceedings

The following resolution was presented by the obituary committee

> Whereas *The following members of this section have been called* from our midst by death and
>
> Whereas The loss of these worthy and distinguished gentlemen is keenly felt by the section and by the profession in general be it
>
> *Resolved* That we, by rising pay deference to the memory of William Ballinger John O Roe and John R. Fletcher be it further
>
> *Resolved* That a copy of this resolution be spread on the minutes and that the Secretary be instructed to notify the families of the deceased of this action

Dr Burt R Shurly Detroit read a paper on "The Relation of the Ductless Glands to Rhinology" No discussion

SECTION ON DERMATOLOGY

Tuesday June 13—Afternoon

The meeting was called to order at 2 20 p m by the chairman Dr Howard Morrow San Francisco Dr Morrow then read the chairman s address, entitled "The Teaching of Dermatology"

The secretary read a letter from Dr Martin F Engman, St Louis addressed to the chairman submitting his report as chairman of the Committee on Leprosy, appointed by this section at the session of the American Medical Association held in 1914

Dr William A Pusey, Chicago, moved that the delegate be instructed to report to the House of Delegates that it was the consensus of opinion of the section that the measure for a national leprosarium now before Congress should be endorsed

Dr Everett S Lain, Oklahoma City, in seconding Dr Pusey's motion, said he had recently learned from Dr Engman that the outlook for this bill was extremely favorable, that it had passed the Senate and had been reported on favorably by the House committee, and that all that was required for its final passage was urging Dr Pusey's motion was thereupon carried, and the delegate of the section was requested to bring the matter before the House of Delegates

Dr *Oliver S Ormsby and Dr James Herbert Mitchell*, Chicago, presented a paper on "Ringworm of the Hands and Feet" Discussed by Drs William T Corlett, Cleveland, Henry C Baum, Syracuse, Richard L Sutton, Kansas City, Mo, Jay F Schamberg, Philadelphia, A Ravogli, Cincinnati, William A Pusey, Chicago, James M King, Nashville, George M MacKee, New York, Walter J Heimann, New York, Ernest Dwight Chipman, San Francisco, Franklin W Cregor, Indianapolis, Clarence J Broeman, Cincinnati, James H Mitchell, Chicago, and Oliver S Ormsby, Chicago

Dr A Ravogli, Cincinnati, read a paper on "Condyloma Acuminatum of the Anal Region" Discussed by Drs Philip Kilroy, Springfield, Mass, William A Pusey, Chicago, William T Corlett, Cleveland, and A Ravogli, Cincinnati

Dr Ernest Dwight Chipman, San Francisco, read a paper on "Dermatologic Dietetics" Discussed by Drs L Duncan Bulkley, New York, Jay F Schamberg, Philadelphia, William A Pusey, Chicago, A Ravogli, Cincinnati, Richard L Sutton, Kansas City, Mo, Marcus Haase, Memphis, Philip Kilroy, Springfield, Mass, Everett S Lain, Oklahoma City, H H Hazen, Washington, D C, Louis L Seaman, New York, Henry C Baum, Syracuse, James M King, Nashville, Tenn, and Ernest Dwight Chipman, San Francisco

The chairman announced that owing to sickness, Dr Fred Wise of New York had requested to be permitted to read his paper out of the regular order of the program This request had received the approval of the Executive Committee and of Dr MacKee, who was willing to postpone his paper for the convenience of Dr Wise

Dr Fred Wise, New York, read a paper on "Pityriasis Lichenoides Chronica A Clinical and Microscopic Study" Discussed by Dr Oliver S Ormsby, Chicago

Dr George Miller MacKee, New York, read a paper on "Erythrodermia Congenitale Ichthyosiforme," with lantern demonstration Discussed by Drs Fred Wise, New York, William A. Pusey, Chicago, and Udo J Wile, Ann Arbor, Mich

Wednesday, June 14—Morning

The meeting was called to order at 9 30 a m

The chairman announced the following to serve as a Nominating Committee Drs Grover W Wende, Buffalo, Richard L Sutton, Kansas City, Mo, and Howard Fox, New York

The following papers were read as a symposium on "Neoplasms"

Dr Meyer L Heidingsfeld, Cincinnati "The Etiologic Role of Scar Tissue in Skin Cancer," with lantern demonstration

Dr Clarence J Broeman, Cincinnati "The Treatment of Epithelioma"

Dr George E Pfahler, Philadelphia "The Treatment of Malignant Disease About the Mouth by Combined Methods," with lantern demonstration

Dr Frank Edward Simpson, Chicago "Radium in the Treatment of Cancer and Various Other Diseases of the Skin," with lantern demonstration

Dr Samuel E Sweitzer, Minneapolis "Leukemia Cutis Report of a Case," with demonstration of patient

These five papers were discussed by Drs H H Hazen, Washington, D C, William H B Aikins, Toronto (by invitation), Richard L Sutton, Kansas City, Mo, Howard Morrow, San Francisco, George M MacKee, New York, Walter I Le Fevre, Cleveland, Meyer L Heidingsfeld, Cincinnati, George E Pfahler, Philadelphia, Frank E Simpson, Chicago, and Samuel E Sweitzer, Minneapolis

The vice chairman, Dr Everett S Lain, Oklahoma City, introduced Dr Charles R Hume of Anadarko, Okla., the president of the Oklahoma State Medical Society

Wednesday, June 14—Afternoon

The meeting was called to order at 2 15 p m

The following papers were read as a symposium on "Syphilis"

Dr Harold N Cole, Cleveland "Report of a Series of Sixty-One Extragenital Chancres," with lantern demonstration

Capt Mathew A Reasoner, Washington, D C "Some Phases of Experimental Syphilis, with Special Reference to the Question of Strains," with lantern demonstration

Dr Richard L Sutton, Kansas City, Mo "The Dyschromias of Syphilis," with lantern demonstration

Drs Udo J Wile and Joseph A Elliott, Ann Arbor, Mich "An Analysis on One Hundred and Twenty-Five Cases of Tertiary Syphilis, with Particular Reference to Their Early Treatment"

Drs Jay Frank Schamberg, John A. Kolmer and George W Raiziss, Philadelphia "The Administration of Dioxydiamido Arsenobenzol Dichlorhydrate by Mouth to Man and Animals"

Drs William B Trimble and John J Rothwell, New York "A Comparative Study of Salvarsan and Neosalvarsan in the Treatment of Syphilis"

Dr H G Irvine, Minneapolis "Notes on the Teaching of Syphilis"

These seven papers were discussed by Drs William A Pusey, Chicago Udo J Wile, Ann Arbor, Mich, Walter J Heimann, New York, Philip Kilroy, Springfield, Mass, L H Cook, Bluffton, Ind, Samuel E Sweitzer, Minneapolis, Franklin W Cregor, Indianapolis, Richard L Sutton, Kansas City, Mo, Henry C Baum, Syracuse, David Lieberthal, Chicago, Harold N Cole, Cleveland, Jay F Schamberg, Philadelphia, Joseph A Elliott, Ann Arbor, Mich, John J Rothwell, New York, and H G Irvine, Minneapolis

On motion, a vote of thanks was extended to Captain Reasoner for his interesting paper and lantern demonstration

Thursday, June 15—Morning

The following officers were elected chairman, Dr H R Varney, Detroit, vice chairman, Dr Frank E Simpson, Chicago, secretary, Dr H H Hazen, Washington, D C, delegate, Dr Richard L Sutton, Kansas City, Mo, alternate Dr Philip Kilroy, Springfield, Mass

The following papers were read as a symposium on "Eczema"

Dr Walter J Heimann, New York "The Pathology and Pathogenesis of Eczema in Dermatitis The Identity of the Two Diseases"

Dr Charles J White, Boston "Two Modern Methods to Be Employed in the Treatment of Chronic Eczema"

Dr Frank C Knowles, Philadelphia "Eczema of External Causation"

These three papers were discussed by Drs Ernest L McEwen, Chicago, Jay F Schamberg, Philadelphia, Henry T Byford, Chicago, Richard L Sutton, Kansas City, Mo, B E Sager, Cleveland, M L Ravitch, Louisville, Ky, Andrew P Biddle, Detroit, Ernest D Chipman, *San Francisco*, John G Burke, Pittsburgh, J M King, Nashville, Lloyd W Ketron, Baltimore, Isadore Dyer, New Orleans, Samuel E Sweitzer, Minneapolis, H H Hazen, Washington, D C, H C Baum, Syracuse, N Y, Frank W Cregor, Indianapolis, R A C Wollenberg, Detroit, Walter J Heimann, New York, Charles J White, Boston, and Frank C Knowles, Philadelphia.

Dr David Lieberthal, Chicago, read a paper on "A Contribution to the Rarer Forms of Lichen *Planus*" Discussed by Drs A Ravogli, Cincinnati, Fred Wise, New York, Richard L Sutton, Kansas City, Mo, H H Hazen, Washington, D C, Walter J Heimann, New York, Lloyd W Ketron, Baltimore, and David Lieberthal, Chicago

Thursday, June 15—Afternoon

Dr M L Ravitch, Louisville, Ky , read a paper on "Focal Infection in Relation to Dermatology" Discussed by Drs Everett S Lain, Oklahoma City, Richard L Sutton, Kansas City, Mo , Walter J Heimann, New York, Ernest L McEwen, Chicago, Howard Morrow, San Francisco, and M L Ravitch, Louisville

Drs Lloyd W Ketron and John H King, Baltimore, read a paper on 'Gastro-Intestinal Findings in Acne Vulgaris" Discussed by Drs M L Ravitch, Louisville, H H Hazen, Washington D C , Walter J Heimann, New York, and Lloyd W Ketron Baltimore

Dr Philip Kilroy, Springfield, Mass read a paper on 'Itching as a Symptom" Discussed by Drs Everett S Lain, Oklahoma City, Frank C Knowles Philadelphia, A Ravogli, Cincinnati, M L Ravitch, Louisville, Ky , and Philip Kilroy, Springfield, Mass

Before adjournment a unanimous vote of thanks was extended to the resident members of the section for their many acts of kindness during the meeting

Friday, June 16—Morning

At a clinical session which convened at the Harper Hospital at 9 a m patients were presented by Drs Udo J Wile Ann Arbor Mich Andrew P Biddle Detroit, H R Varney Detroit, Rollin H Stevens Detroit, R A C Wollenberg, Detroit, and E D Tucker Toledo, Ohio

These cases were discussed by Drs Richard L Sutton, Kansas City, Mo , Ernest D Chipman San Francisco, Frank C Knowles, Philadelphia, H R Varney Detroit, O H Foerster Milwaukee Andrew P Biddle Detroit, A Ravogli Cincinnati, H H Hazen Washington, D C , J M King Nashville, Tenn , Howard Morrow San Francisco, Samuel E Sweitzer, Minneapolis, Philip Kilroy, Springfield, Mass , and Clarence J Broeman, Cincinnati

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SECTION ON NERVOUS AND MENTAL DISEASES

Tuesday, June 13—Afternoon

The section was called to order by the chairman, Dr George A Moleen, Denver

Dr George A Moleen, Denver, read the chairman s address entitled "The Nervous System as Influenced by High Altitudes"

Dr Peter Bassoe Chicago, read a paper on 'Tumors of the Third and Fourth Ventricles" with lantern demonstration Discussed by Drs Theodore H Weisenburg Philadelphia, Tom A Williams Washington, D C , Harold N Moyer, Chicago, Lawson G Lowrey Hathorne Mass , A L Skoog, Kansas City Mo., and Peter Bassoe Chicago

The chairman appointed the following members to act as a nominating committee Drs Theodore H Weisenburg, Philadelphia, chairman, C Eugene Riggs, St Paul, and Walter F Schaller San Francisco

Dr R Foster Kennedy, New York, read a paper on "A Further Note on the Diagnostic Value of Retrobulbar Neuritis in Expanding Lesions of the Frontal Lobes" Discussed by Drs Francis R Fry, St Louis, and R Foster Kennedy, New York

The chairman referred to the recommendation received from the secretary of the Council on Scientific Assembly that the Section on Nervous and Mental Diseases be made a part of a general section on medicine with a view to condensation of the number of sections, stating that it would be well for those interested in the work of the section to give the matter thought, and in case any action were to be taken in the way of recommendations to the House of Delegates, he would be glad to entertain a motion to that effect

Dr Theodore H Weisenburg, Philadelphia, read a paper on A Clinical Study of Unusual Symptoms in Hemiplegia and Diplegia Discussed by Francis X Dercum, Philadelphia, Walter Timme, New York, George A Moleen, Denver, J Ramsay Hunt, New York, and Theodore H Weisenburg, Philadelphia

Dr Charles K Mills, Philadelphia, read a paper on "Some Clinical Studies of the Problems of Cerebral Tone" Discussed by Drs William J Hickson, Chicago, Julius Grinker, Chicago, R Foster Kennedy, New York, J Ramsay Hunt, New York, and Charles K Mills, Philadelphia

On motion, carried, the subject of the condensation of this section with a general section on medicine was made a special order of business to be considered at the termination of the scientific program Wednesday morning

Dr I Leon Meyers, Chicago, read a paper on "Cerebellar Localization An Experimental Study by a New Method" Discussed by Drs Julius Grinker, Chicago, Charles K Mills, Philadelphia, Tom A Williams, Washington, D C, and I Leon Meyers, Chicago

Wednesday, June 14—Morning

The chairman announced that, in order to expedite matters, it had been suggested that a committee be appointed for the purpose of formulating and presenting to this body for its consideration a resolution with reference to the objections entertained by the members to condensation of this section with a general section on medicine

Dr Charles K Mills, Philadelphia, moved that a committee of three be appointed to prepare such resolution, same to be presented at the end of this session Motion carried

The chairman appointed as such committee Drs Francis X Dercum Philadelphia, C Eugene Riggs, St Paul, and J Ramsay Hunt New York

Dr Charles K Mills further moved that the delegate of this section Dr J H McBride, Pasadena, Calif, be added to the committee named, making four on the committee Motion carried Whereupon the chairman added Dr J H McBride to the committee as named by him

Dr Francis X Dercum, Philadelphia, read a paper on "Epilepsy with Special Reference to Treatment" Discussed by Drs George A Moleen Denver, David T Weeks Skillman N J , A L Skoog Kansas City, Mo , Francis R Fry St Louis, Charles R Ball, St Paul, William Ravine, Cincinnati, Julius Grinker, Chicago, R A Greene, Palmer Mass , James H McBride, Pasadena, Calif , Joseph M Aikin Omaha, William J Hickson, Chicago, Francis A Ely, Des Moines, Ia , I Leon Meyers, Chicago, D S Booth, St Louis, Robert McGregor, Saginaw, Mich , J Matthew Pulliam Fort Wayne Ind , R Foster Kennedy, New York, Walter Timme, New York, L Kauffman, Buffalo, and Francis X Dercum, Philadelphia

The chairman announced that the National Association for the Study of Epilepsy had sent a cordial invitation to members of the section to attend a meeting of the association at the Hotel Tuller, Friday, June 16, at 10 a m and 2 p m

Dr J Ramsay Hunt, New York, read a paper on "The Progressive Torsion Spasm (Dystonia Musculorum Deformans)" Discussed by Drs Hugh T Patrick, Chicago, E W Haass, Detroit (with exhibition of patient), A L Skoog, Kansas City, and J Ramsay Hunt, New York

Dr Hugh T Patrick Chicago, read a paper on 'The Factor of Fear in Nervous Cases" Discussed by Drs Frank P Norbury, Springfield, Ill , Harold N Moyer, Chicago, Robert McGregor, Saginaw, Mich , Walter B Cannon, Boston, Tom A Williams, Washington, D C , Walter B Swift, Boston, R Foster Kennedy, New York, Francis R Fry, St Louis, Charles R Ball, St. Paul, U G Darling, Chicago, D S Booth St Louis, and Hugh T Patrick, Chicago

Dr J Ramsay Hunt, New York, member of the committee appointed to prepare a resolution and report to the section in the matter of the proposed amalgamation of the section with the Section on Medicine, presented a report which was referred to the House of Delegates

Wednesday, June 14—Afternoon

The chairman announced that the report of committee which was presented as the last order of business at the morning session would be placed in the hands of the delegate from this section for presentation to the House of Delegates [not presented to the House of Delegates]

Dr A M Barrett, Ann Arbor, Mich, read a paper on "Syphilitic Psychoses Associated with Manic Depressive Symptoms and Course" Discussed by Drs Frank P Norbury, Springfield, Ill, Hugh T Patrick, Chicago, W F Lorenz, Mendota, Wis, Milton Board, Louisville, Ky, Julius Grinker, Chicago, and C Eugene Riggs, St Paul

Drs James B Ayer and Henry R Viets, Boston, presented a paper on "Spinal Fluid Findings Characteristic of Cord Compression," read by Dr Ayer Discussed by Drs Peter Bassoe, Chicago, Francis A Ely, Des Moines, A L Skoog, Kansas City, Ernest Sachs, St Louis, Charles R Ball, St Paul, W F Lorenz, Mendota, Wis, Charles A Elsberg, New York, and James B Ayer, Boston

Dr Morris J Karpas, New York, read a paper on "Constitutional Inferiority in the Light of Modern Conceptions" Discussed by Drs Frank P Norbury, Springfield, Ill, and Morris J Karpas, New York

Dr Lewis J Pollock, Chicago, read a paper on "Experimental Studies of Injection of the Gasserian Ganglion Controlled by Fluoroscopy" Discussed by Drs Hugh T Patrick, Chicago, Julius Grinker, Chicago, M A Bliss, St Louis, Mo, Charles R Ball, St Paul, Ernest Sachs, St Louis, George M Dorrance, Philadelphia, and Lewis J Pollock Chicago

Dr George M Dorrance, Philadelphia, read a paper on "A New Method of Injecting the Facial Nerve for Relief of Facial Spasm" Discussed by Drs Hugh T Patrick, Chicago, A L Skoog, Kansas City, Julius Grinker, Chicago, and George M Dorrance, Philadelphia

Dr William A Jones, Minneapolis, read a paper on "Myasthenia Gravis" Discussed by Drs Walter B Swift, Boston, R Foster Kennedy, New York, C Eugene Riggs, St Paul, George A Moleen, Denver, and William A Jones, Minneapolis

Drs Pearce Bailey and Walter Timme, New York, presented a paper on "A Contribution to the Pathogenesis of Progressive Muscular Dystrophy, with the Consideration of Evidence Connecting this Disease with Disturbances in the Endocrine Glands," read by Dr Timme Discussed by Drs A L Skoog, Kansas City, M A Bliss, St Louis, Lewis J Pollock, Chicago, George A Moleen, Denver, Albert E Sterne, Indianapolis, and Walter Timme, New York

Thursday, June 15—Morning

The chairman announced the appointment of Dr William A Jones, Minneapolis, on the Executive Committee, to take the place of Dr Francis X Dercum, who had found it necessary to retire, and that therefore, for the remainder of the session, papers would be approved by Dr Jones as member of the Executive Committee

The following officers were elected for the ensuing year chairman, Dr Bernard Sachs, New York, vice chairman, Dr Charles W Hitchcock, Detroit, secretary, Dr A S Hamilton, Minneapolis, delegate, Dr George A Moleen, Denver

Dr Harry H Drysdale, Cleveland, read a paper on "Conjugal Paresis Report of a Case" Discussed by Drs Julius Grinker, Chicago, J Matthew Pulliam, Fort Wayne, Ind, Lawson G Lowrey, Hathorne, Mass, C C Burlingame, South Manchester, Conn, William Ravine, Cincinnati, W F Lorenz, Mendota, Wis, Charles R Ball, St Paul, G H Moody, San Antonio, Texas, S G Burnett, Kansas City, Mo, Robert H Haskell, Ionia, Mich, George A Moleen, Denver, and Harry H Drysdale, Cleveland

Dr Henry F Stoll, Hartford, Conn, read a paper on "Syphilis as a Cause of Chronic Invalidism" Discussed by Drs W W Graves, St Louis, A L Skoog, Kansas City, William Ravine, Cincinnati, and Henry F Stoll, Hartford, Conn

Dr Walter F Schaller, San Francisco, read a paper on "The Early Diagnosis of Tabes Dorsalis"

Drs C Eugene Riggs and Ernest M Hammes, St Paul, presented a paper on "Shall We Treat the Paretic?" read by Dr Riggs

Dr Charles R Ball, St Paul, read a paper on "A Consideration of the Serobiologic Reactions after Five Years of Observation"

Dr L B Pilsbury, Lincoln, Neb, read a paper on "Mercurial Medication with Spinal Drainage"

These four papers were discussed by Drs J Henry Barbat, San Francisco, Tom A Williams, Washington, Albert E Sterne, Indianapolis, Julius Grinker, Chicago, Capt M A Reasoner, Washington, D C, G H Moody, San Antonio, Texas, Henry F Stoll, Hartford, Conn, W F Lorenz, Mendota, Wis, James B Ayer, Boston, Robert H Haskell, Ionia, Mich, M S Woodbury, Clifton Springs, N Y, George A Moleen, Denver, L C Bacon, St Paul, Walter F Schaller, San Francisco, C Eugene Riggs, St Paul, Charles R Ball, St Paul, and L B Pilsbury, Lincoln, Neb

Thursday, June 15—Afternoon

Dr Walter B Swift, Boston, read a paper on "A New Treatment of Paralysis Agitans" No discussion

Dr William Fuller, Grand Rapids, Mich, read a paper on "Necessity of Revising the Nomenclature of the Anatomy of the Brain" Discussed by Drs I Leon Meyers, Chicago, William A Jones, Minneapolis, Walter B Swift, Boston, D S Booth, St Louis, and William Fuller, Grand Rapids

Dr Tom A Williams, Washington, read a paper on "A Contribution to the Pathogenesis of the Migraines Notes Concerning a More Efficacious Treatment" Discussed by Drs J Matthew Pulliam, Fort Wayne, Ind, J C De Venney, Harrisburg, Pa, and Tom A Williams, Washington, D C

The chairman announced the appointment of Dr Ross Moore, Los Angeles, on the Executive Committee, to take the place of Dr W W Graves, who had been obliged to go away before the meeting adjourned

A vote of thanks was extended to the members of the profession of the city of Detroit for the entertainment furnished and for the comfortable surroundings in which the meeting of the section had been held

A vote of thanks was extended to the retiring chairman of the section for his efficient services in connection with the meeting, and also a vote of thanks was extended to the secretary, whose efforts had made possible the very exceptional arrangement of the program and who had secured papers exhibiting such great variety in subject and serving to maintain so much interest in the discussions

SECTION ON PHARMACOLOGY AND THERAPEUTICS

Tuesday, June 13—Afternoon

The meeting was called to order at 2 05 p m by the chairman, Dr R A Hatcher, New York

Mr M I Wilbert, Washington, D C, read a communication from the American Pharmaceutical Association moving that the members of this delegation who are not members of the Section on Pharmacology and Therapeutics be given the privilege of the floor Motion carried

He reported an application by Mr Clarence G Spalding of New Haven, Conn, a member of the American Pharmaceutical Association and endorsed by the Society of the County, and moved that it be further endorsed by the Section on Pharmacology and Therapeutics and referred to the House of Delegates Motion carried

Dr R A Hatcher, New York, then read the chairman's address entitled, "The Medical Profession and Its Duty Toward the Work on Pharmacy and Chemistry"

Dr John F Anderson, New Brunswick, N J, then read the following resolution, moving that the same be accepted and presented to the House of Delegates

Whereas, Methods for the bio assay of certain drugs are to be included in the U S P IX, although with the exception of the solution of hypophysis they are optional, and

Whereas, It is important that uniform standards be employed for such assays, therefore, be it

Resolved That the Section on Pharmacology and Therapeutics urgently recommend the House of Delegates to request the Secretary of the Treasury to authorize the United States Public Health Service to prepare and distribute for use in the bio assay of cannabis, aconite, digitalis strophanthus squill suprarenal gland and hypophysis the standards as recommended in the U S P IX

Adopted on motion of the Section on Pharmacology and Therapeutics June 13, 1916

Prof Joseph P Remington, Philadelphia, then read the address of the chairman of the delegation from the American Pharmaceutical Association No discussion

Dr Torald Sollmann Cleveland, read a paper on "The Therapeutic Research Committee of the Council on Pharmacy and Chemistry of the American Medical Association" Discussed by Drs Francis E Stewart, Philadelphia, Fred I Lackenbach San Francisco, Irvin J Moyer, Pittsburgh, Oliver T Osborne, New Haven, Conn, and Torald Sollmann, Cleveland

Dr W A Puckner, Chicago read a paper on 'The Work of the Chemical Laboratory of the American Medical Association' Discussed by Drs Francis E Stewart, Philadelphia, Prof Joseph P Remington Philadelphia, Oliver T Osborne New Haven, Conn, Fred I Lackenbach, San Francisco and W A Puckner Chicago

Mr Martin I Wilbert Washington, D C, read a paper on "Useful Drugs The Origin and Development of the Book" Discussed by Drs Oliver T Osborne, New Haven, Conn, and Noble P Barnes Washington D C

Dr F P Morgan Washington, D C, read a paper by Dr M W Glover and himself on "Some Advantages of an Authoritative Publication on the Uses of Drugs" Discussed by Drs Oliver T Osborne, New Haven, Conn, and Francis E Stewart, Philadelphia

Wednesday, June 14—Morning

The paper by Dr William Worth Hale of Boston, on "The Action of the Cinchona Alkaloids on the Uterus and Their Possible Use in Obstetrics" was read in the author's absence with the consent of the section by the secretary, Mr M I Wilbert, Washington D C. No discussion

Dr Louis A Levison Toledo, Ohio, read a paper on "The Results of Treatment in Cases of Arterial Hypertension Due to and Associated with Syphilis"

Dr Loyd Thompson, Hot Springs Ark., read a paper on "The Intensive Treatment of Syphilis"

These two papers were discussed by Drs William W Tompkins Charleston W Va Noble P Barnes, Washington, D C, Fred I Lackenbach San Francisco, A. G Shortle Albuquerque, N M, G Reese Satterlee, New York Louis A. Levison Toledo, Ohio, and Loyd Thompson, Hot Springs, Ark.

Dr D E. Drake, New Foundland, N J read a paper on "A New Development in Sanatorium Treatment"

Dr G Reese Satterlee, New York, read a paper on 'Autogenous Colon Vaccines as Used in Chronic Intestinal Toxemia, with Special Reference to Diagnosis and Therapeusis"

These two papers were discussed by Drs Ernest S Bishop, New York, Fenton B Turck, New York, and G Reese Satterlee, New York.

Wednesday, June 14—Afternoon

The secretary, Mr M I Wilbert Washington, D C., read a communication from the secretary of the American Medical Association, Dr Alexander R Craig including three applications for Associate Fellowship through the Section on Pharmacology and Therapeutics He moved that the applications if otherwise correct be endorsed by the Section on Pharmacology and Therapeutics to the House of Delegates Motion carried

Dr E L Eggleston, Battle Creek, Mich., read a paper on The Status of Physical Therapeutics in the Medical College Curriculum of Today Discussed by Drs Thomas Francis Reilly New York Noble P Barnes, Washington, D C., Walter E Simmonds Chicago, Bernard Fantus, Chicago, and E L. Eggleston

Dr A G Shortle, Albuquerque, N M read a paper on Ultimate Results in the Treatment by Artificial Pneumothorax.' No discussion

Dr Harvey G Beck, Baltimore, read a paper on "An Apparatus Designed for the Use of Partial Vacuum in Diagnosis and Treatment" No discussion

Thursday, June 15—Morning

The following officers were elected chairman, Dr A W Hewlett, San Francisco, vice chairman, Dr Arthur D Hirschfelder, Minneapolis, secretary, Mr Martin I Wilbert, Washington D C, delegate, Dr R A Hatcher, New York, alternate Dr John F Anderson, New Brunswick N J, executive committee, Drs Ray L Wilbur, San Francisco, John F Anderson, New Brunswick, N J, and R A Hatcher, New York

Dr Paul J Hanzlik, Cleveland, read a paper on "Salicylate Albuminuria" Discussed by Drs Torald Sollmann, Cleveland Ray L Wilbur San Francisco, Irwin J Moyer, Pittsburgh, and Paul J Hanzlik, Cleveland

The paper of Dr Ernest S Bishop, New York, on "The Rational Handling of Narcotic Addicts," was read by Dr Paul J Hanzlik Cleveland, owing to the indisposition of the author, who was, however, present No discussion

SECTION ON PREVENTIVE MEDICINE AND PUBLIC HEALTH

Tuesday, June 13—Afternoon

The meeting was called to order at 2 p m by the chairman, Dr William C Rucker, Washington D C

Moved by Dr H E Dearholt, Milwaukee, Wis, that Dr Charles B Johnson, Champaign Ill, be chosen delegate of this section in the House of Delegates Motion carried

Dr William C Rucker read the chairman's address on "The Health Education of the General Public.

The following papers were read as a symposium on "Health Administration

Dr Ernest C Levy, Richmond, Va "Municipal Health Administration" Discussed by Drs Guy L Kiefer, Detroit, Francis E. Fronczak Buffalo, Mr I M Rubinow New York, Drs C J Hastings, Toronto, Ont, and Ernest C Levy, Richmond, Va

Dr C. St Clair Drake, Springfield, Ill "District Health Organization" Discussed by Drs H M Bracken, Minneapolis, B Franklin Royer, Harrisburg, Pa, John N Hurty, Indianapolis, W J Denno, New York, L. R Williams, Albany N Y, and C St. Clair Drake, Springfield, Ill

Dr Watson S Rankin Raleigh, N C "County Health Organization" Discussed by Drs James Adams Hayne, Columbia, S C, H M Bracken, Minneapolis, John N Hurty Indianapolis, O B Nesbit, Gary, Ind, and Watson S Rankin, Raleigh, N C

Wednesday, June 14—Morning

The report of the Committee on Industrial Sanitation was read by Dr J W Kerr, Washington D C. It was moved that the report be received Motion carried

The following papers were read as a symposium on "Health Problems in Industry"

Dr Harry E Mock Chicago "Industrial Medicine and Surgery—The New Specialty ' Discussed by Drs Joseph C Bloodgood Baltimore, and J W Schereschewsky, Pittsburgh

A motion was carried that the section pass to the next paper, by reason of the lateness of the hour, and the two papers be discussed jointly

Dr W Irving Clark, Jr, Worcester, Mass 'Medical Supervision of Factory Employees Result of Five Years' Experience."

These two papers were discussed by Drs W H Price, Detroit, Frederick L Van Sickle, Olyphant Pa, D B Lowe, Akron Ohio, C G Farnum Peoria Ill, Charles J Hastings, Toronto Ont., Eugene L. Fisk New York, C A. Lauffer Wilkinsburg Pa, W H Lipman Chicago Harry E. Mock, Chicago, John L Burkhart Lansing, Mich, and W Irving Clark, Jr, Worcester Mass

On motion, duly carried the discussion of the various papers in this symposium was deferred until the remaining papers in this symposium were read

Dr Charles H Lemon, Milwaukee, Wis "Medical Supervision of Street Railway Employees"

Dr Carl E Smith, Akron, Ohio "Bad Teeth and Their Effect on the Workman's Efficiency"

Dr Benjamin S Warren, Washington, D C "The Relation of Health Insurance to National Health"

Mr I M Rubinow, New York "The Relation of Health Insurance to the Wage Earner"

On motion, duly carried, the time of Mr I M Rubinow, New York, in reading his paper was indefinitely extended

The chairman announced members of the Nominating Committee as follows Drs Henry M Bracken, Minneapolis, C G Farnum, Peoria, Ill, and Dr E G Williams, Richmond, Va

The papers of Dr Benjamin S Warren, Washington, D C, and Mr I M Rubinow, New York, were discussed by Drs Alexander Lambert, New York, Edwin V Delphey, New York, Benjamin S Warren, Washington, D C, and Mr I M Rubinow, New York

It was moved that the delegate of the Section on Preventive Medicine and Public Health to the House of Delegates be instructed to consider the question of a public health exhibit in connection with the next annual meeting Motion carried

Thursday, June 15—Morning

By reason of the absence of the chairman of the Nominating Committee, the election of officers was deferred

The following papers were read as a symposium on the "Sanitation of Food Supplies"

Dr Hugh S Cumming, Washington, D C "Sanitation of the Shellfish Industry" Discussed by Drs William W Ford, Baltimore, B Franklin Royer, Harrisburg, Pa, and Hugh S Cumming, Washington, D C

The report of Dr H M Bracken, Minneapolis, chairman of the Nominating Committee, was read and the following nominations made chairman Dr O P Geier, Cincinnati, vice president, Dr Ernest C Levy, Richmond, Va, secretary, Dr A M Harvey, Chicago, delegate, Dr William C Rucker, Washington, D C, alternate, Dr John N Hurty, Indianapolis, orator, Dr W S Rankin, Raleigh, N C The report was received, and the secretary cast the ballot of the section Those nominated were declared elected

Dr Robert T Legge, Berkeley, Calif, read a paper by Dr Donald B Armstrong, New York, on "Sanitation of Markets" Discussed by Drs John N Hurty, Indianapolis, John Dill Robertson, Chicago, Harold B Wood, Charleston, W Va, Mary Dunning Rose, New York, William W Tompkins, Charleston, W Va, Charles J Hastings, Toronto, Ont, and Dr Robert T Legge, Berkeley, Calif

Dr O P Geier, Cincinnati, read a paper on "Health Laboratory Organization" by William H Park, New York Discussed by Dr O P Geier

A motion that a vote of thanks be extended the retiring officers of the section was made Seconded by Drs John Dill Robertson and A E Campbell, Chicago Motion carried

SECTION ON STOMATOLOGY

Tuesday, June 13—Afternoon

The meeting was called to order by the chairman, Dr Frederick B Moorehead, Chicago

The secretary, Dr E S Talbot presented a number of applications for Associate Fellowship, and the applicants were approved

The following papers were read as a symposium on "The Principles Involved in Chronic Mouth Infections in Their Relation to General Diseases"

Dr Frederick B Moorehead, Chicago "The Prevalence of Chronic Mouth Infections and Their Management" (chairman's address)

Dr Frank Billings, Chicago "The Principles Involved in Focal Infections as Related to Systemic Disease"

Dr Ernest E Irons, Chicago "Focal Infections and Dental Disease Treatment and Results from Medical Standpoint"

These three paper were discussed by Drs Robert Hestler, Logansport, Ind, M L Rhein, New York, M H Cazier, New York, W D Caldin, Fort Wayne, Ind, G R Satterlee, New York, William C Fisher, New York, John E Nyman Chicago, William Price, Cleveland, Ernest E Irons, Chicago, Frank Billings, Chicago, and Frederick B Moorehead, Chicago

Drs M L Rhein and Arthur Black were elected members of the Executive Committee to fill the places of Drs S L McCurdy and Virgil Loeb

Wednesday, June 14—Afternoon

The meeting was called to order by the vice chairman, Dr Arthur D Black, Chicago

The following papers were read as a symposium on "Interstitial Gingivitis and Pyorrhea Alveolaris"

Dr Alexander W Lescohier, Detroit "Bacterial Findings and Their Relation to Pyorrhea Alveolaris and Interstitial Gingivitis"

Dr Hollis P Potter, Chicago "The Roentgen Ray in Diagnosis"

Dr M L Rhein, New York "The Importance of a Correct Differential Diagnosis of the Predisposing Causes in Interstitial Gingivitis and Pyorrhea Alveolaris"

Dr George B Harris, Detroit "Some Studies in the Treatment of Pyorrhea Alveolaris"

Dr Eugene S Talbot, Chicago "The Etiology and Treatment of Interstitial Gingivitis"

These five papers were discussed by Drs Arthur Black, Chicago, F D Leach, Chicago, R W Bunting, Ann Arbor, Mich, E S Talbot, Chicago, M L Rhein, New York, George B Harris, Detroit, C H Gint, Medina, Ohio, W C Fisher, New York, H E Potts, Chicago, Alexander W Lescohier, Detroit, and Hollis P Potter, Chicago

Thursday, June 15—Morning

The following officers were elected chairman, Dr Arthur Black, Chicago, vice chairman, Dr Henry Dunning, New York, secretary, Dr Eugene S Talbot, Chicago, delegate, Dr W C Fisher, New York, alternate, Dr R W Bunting, Ann Arbor, Mich

Dr C J Lyons, Ann Arbor, Mich, read a paper on "Ankylosis of the Temporomandibular Joint" Discussed by Drs H A. Potts, Chicago, and C J Lyons, Ann Arbor, Mich

Dr Jonathan W Means, Columbus, Ohio, read a paper on "A Clinical Pathologic Study of Malignant Conditions About the Face, Mouth and Jaws" Discussed by Drs Frederick B Noyes, Chicago, Herbert A Potts, Chicago, F D Leach, Chicago, Frederick B Moorehead, Chicago, and Jonathan W Means, Columbus Ohio

Dr Herbert A Potts, Chicago, read a paper on "Surgical Procedures Enhancing the Relation of Artificial Dentures, with Report and Illustrations of an Unusual Case" Discussed by Drs C J Lyons, Ann Arbor, Mich, Eugene S Talbot, Chicago, and Herbert A Potts, Chicago

Dr Frederick B Noyes, Chicago, read a paper on "A Study of the Lymphatics of the Dental Pulp" Discussed by Drs George V I Brown, Milwaukee, Wis, Arthur Black, Chicago, Eugene S Talbot, Chicago, Frederick B Moorehead, Chicago, and Frederick B Noyes, Chicago

The secretary read the name of Dr E L Singleton of Pittsburgh as an applicant for Association Fellowship His name was unanimously voted on for the consideration of the House of Delegates

SECTION ON ORTHOPEDIC SURGERY

Tuesday, June 13—Afternoon

The meeting was called to order at 2 o'clock by the chairman, Dr Russell A Hibbs, New York

Dr Russell A Hibbs, New York, read the chairman's address, entitled "The Problem of the Chronic Cripple" No discussion

Dr Robert W Lovett, Boston, read a paper on "The Treatment of Infantile Paralysis" Discussed by Drs E W Ryerson, Chicago, H W Frauenthal, New York, Frederick C Kidner, Detroit, Albert H Freiberg, Cincinnati, F J Gaenslen, Milwaukee, Wis, A L Fisher, San Francisco, James T Watkins, San Francisco, W G Stern, Cleveland, W R. MacAusland, Boston, C. A Parker, Chicago, F E

Peckham, Providence, R I , Roland W Meisenbach, Buffalo, C B Francisco Kansas City, Mo , and R. W Lovett Boston

Dr Frederick C Kidner, Detroit, read a paper on Calcified Hematoma A Study of the Pathology" Discussed by Drs W C Campbell Memphis Tenn , James T Watkins, San Francisco, J D Griffith, Kansas City, Mo , and Frederick C Kidner, Detroit

Dr Wallace Blanchard, Chicago read a paper on "Osteoclasis and Osteotomy' Discussed by Drs J Torrance Rugh, Philadelphia, Leonard W Ely, San Francisco, Roland W Meisenbach Buffalo, Edward S Hatch, New Orleans, and Wallace Blanchard, Chicago

Dr William R MacAusland, Boston, read a paper on "Astragalectomy (Whitman's Operation) in Infantile Paralysis" Discussed by Drs Frederick C Kidner, Detroit, J D Griffith, Kansas City Mo , Albert H Freiberg, Cincinnati, C M Jacobs Chicago, E W Ryerson, Chicago, W C Campbell, Memphis Tenn , R L Hull Oklahoma City , C B Francisco Kansas City Mo and William R MacAusland, Boston

Dr Walter G Stern Cleveland read a paper on "The Prognosis in Infantile Paralysis Discussed by Drs H W Frauenthal, New York and Walter G Stern, Cleveland

Wednesday, June 14—Morning

Dr Willis C Campbell Memphis Tenn, read a paper on 'Localized Osteospondylitis" Discussed by Drs F J Gaenslen Milwaukee Wis , A H Freiberg Cincinnati, Roland W Meisenbach Buffalo, J T Rugh, Philadelphia and Willis C. Campbell Memphis Tenn

Dr Arthur L. Fisher San Francisco read a paper on Syphilitic and Bone and Joint Lesions Simulating Tuberculosis" Discussed by Drs H W Frauenthal, New York, John Ridlon Chicago James T Watkins San Francisco, Edward S Hatch New Orleans, E W Ryerson Chicago, Walter T Stern Cleveland, Reginald H Sayre New York, Clarence B Francisco Kansas City Mo , Leonard W Ely San Francisco, Emil S Geist Minneapolis, H L Taylor, New York A E Horwitz, St Louis, and Arthur L Fisher San Francisco

Dr Leonard W Ely, San Francisco, read a paper on "Ankylosing Operations on the Spine" Discussed by Drs Russell A Hibbs New York Reginald H Sayre New York, James T Watkins, San Francisco, E. W Ryerson, Chicago, J Torrance Rugh, Philadelphia and Leonard W Ely, San Francisco

Dr Henry Ling Taylor, New York, read a paper on Results of Research on Conditions Affecting Posture" Discussed by Drs Joel E Goldthwait Boston, E. W Mosher, Brooklyn, Walter G Elmer Philadelphia, Roland O Meisenbach Buffalo, S A Knapp, New York, and Henry Ling Taylor, New York

Dr Melvin S Henderson, Rochester, Minn, read a paper on 'Mechanical Derangements of the Knee Joints" Discussed by Drs John Ridlon Chicago, J P Lord Omaha, Willis C Campbell Memphis, Tenn , Robert B Osgood Boston E W Ryerson Chicago, James T Watkins, San Francisco, and Melvin S Henderson, Rochester, Minn

Wednesday, June 14—Afternoon

Dr Mark H Rogers, Boston read a paper on "Sciatica An Analysis of Fifty Cases' Discussed by Drs Leonard W Ely, San Francisco, Melvin S Henderson, Rochester, Minn , Joel E Goldthwait Boston, Roland O Meisenbach Buffalo, John Ridlon Chicago J D Griffith Kansas City Mo , E. W Ryerson, Chicago, Frank E Peckham, Providence, R. I , James T Watkins San Francisco, Albert H Freiberg, Cincinnati, Reginald H Sayre, New York, A L Fisher, San Francisco and Mark H Rogers Boston

Dr E W Ryerson, Chicago read a paper on "Fat Embolism in Bone Surgery Incidence and Control" No discussion

Dr Robert B Osgood, Boston, read a paper on Orthopedic Surgery in War Time" Discussed by Drs Nathaniel Allison, St. Louis, E. W Fiske, Boston, J D Griffith, Kansas City, Mo , Joel E Goldthwait, Boston, J Torrance Rugh, Philadelphia, John Ridlon, Chicago, and Henry W Frauenthal, New York

It was moved that Dr Osgood be allowed all the time necessary to present his slides Motion carried

Drs Robert E Humphries and Henry A Durham, New York, read a paper on 'The End-Results of Tuberculosis of the Spine, Hip, Knee and Ankle Joints from the Records of the New York Orthopedic Dispensary and Hospital" Discussed by Drs John Ridlon, Chicago, Reginald H Sayre, New York, Charles M Jacobs, Chicago, and Robert E Humphries, New York

Dr Albert H Freiberg, Cincinnati, read a paper on "The Evolution of Osteochondritis Deformans Coxae Juvenilis" Discussed by Drs J R Kuth, Duluth, Minn , Frederick C Kidner, Detroit, John Ridlon, Chicago, Virgil P Gibney New York, H L Taylor, New York, and Albert H Freiberg, Cincinnati

Dr Albert Ehrenfried, Boston, read a paper on "Hereditary Deforming Chondrodysplasia—Multiple Cartilaginous Exostoses" Discussed by Drs Albert H. Freiberg, Cincinnati, and Albert Ehrenfried, Boston

Dr Charles A Parker, Chicago, read a paper on "A Plea for the Prevention of Deformities Following Burns" Discussed by Drs J P Lord, Omaha, Charles M Jacobs, Chicago, and Charles A Parker

Thursday, June 15—Morning

On motion, the reading of the minutes of the previous executive session was dispensed with, and they were referred to the Executive Committee Motion carried

The following officers were elected chairman, Dr E W Ryerson Chicago, vice chairman, Dr Robert B Osgood, St Louis, secretary, Dr Emil S Geist, Minneapolis, delegate, Dr John Ridlon, Chicago, alternate, Dr Leonard W Ely San Francisco

Dr Ely, chairman of the Committee on Tuberculosis, reported that the committee had not done its work and was not ready with a report On motion the committee was continued Motion carried

The Committee on Crippled Children, through its chairman, Dr Nathaniel Allison, St. Louis, presented a report It was not read in full, but only the concluding part, containing the recommendation of the committee This report will be sent to the Association A discussion ensued On motion of Dr Griffith, the report was received and adopted Motion carried A motion was then made that the committee formulate a resolution to be transmitted to the House of Delegates, and that the secretary be instructed to see that this was given to Dr Ridlon for presentation at once The motion was carried

The secretary made a statement concerning the proper way for those desiring to obtain copies of the Transactions to proceed He then brought up the subject of a letter that he had received, suggesting that the length of the meeting and the number of papers of the section be curtailed Dr Freiberg, in this connection, offered a resolution relative to the work of the section, which was referred to the House of Delegates

Under new business Dr Allison made a motion that a committee consisting of five members, including the chairman and Dr Goldthwait, as chairman, be appointed to consider, with the Committee of the American Orthopedic Association the best method of establishing a system of preparedness in orthopedic surgery in this country The motion was carried Dr Hess appointed, as the other three members of this committee Drs Melvin S Henderson, Robert B Osgood and Nathaniel Allison

Dr Charles M Jacobs, Chicago, read a paper on "Compression Paralysis of Pott's Disease in Adults' Discussed by Drs Henry W Frauenthal, New York, J Torrance Rugh Philadelphia, A. L. Fisher San Francisco, Reginald H Sayre New York, F J Gaenslen, Milwaukee, Wis , James T Watkins San Francisco, Edward S Hatch, New Orleans, Albert H Freiberg Cincinnati, C. M. Jacobs, Chicago and Reginald H Sayre New York.

Drs Nathaniel Allison and Herbert H Hagan, St Louis, presented a paper on "The Operative Treatment of Tuberculosis of the Spine" Discussed by Drs Fred H Albee, New York, J Torrance Rugh, Philadelphia, and James T Watkins, San Francisco

Dr John Ridlon, Chicago, read a paper on "A Report of Two Cases of Scoliosis with Pressure Paraplegia" Discussed by Drs Leonard W Ely, San Francisco, J D Griffith, Kansas City, Mo, and Reginald H Sayre, New York

Dr George W Hawley, Bridgeport, Conn, read a paper on "New Methods of Precision in the Treatment of Fractures"

Dr Frank E Peckham, Providence, R I, read a paper on "The Treatment of Some Fractures of the Femur"

These two papers were discussed by Drs Fred H Albee, New York, James T Watkins, San Francisco, J Torrance Rugh, Philadelphia, John Ridlon, Chicago, H R Allen, Indianapolis, J S A Gerster, New York, E W Ryerson, Chicago, and Frank E Peckham, Providence, R I

SECTION ON GENITO-URINARY DISEASES

Tuesday, June 13—Afternoon

The meeting was called to order at 2 15 p m by the chairman, Dr Louis E Schmidt, Chicago

Dr Victor D Lespinasse, Chicago, read a paper on "Studies in Sterility An Outline of a Method of Diagnosis and Treatment" Discussed by Drs W C Quinby, Baltimore, H L Sanford, Cleveland, A L Wolbarst, New York, Charles M McKenna, Chicago, Leland Boogher, St Louis, Granville MacGowan, Los Angeles, Louis E Schmidt, Chicago, and Victor D Lespinasse, Chicago

Drs Edward L Keyes, Jr, and David W MacKenzie, New York, presented a paper on "The Operative Treatment of Cryptorchidism" Discussed by Drs Louis E Schmidt, Chicago, Granville MacGowan, Los Angeles, and John A. Hawkins, Pittsburgh Dr Keyes showed moving pictures illustrating the operation for cryptorchidism

Dr J Bentley Squier, New York, showed moving pictures illustrating nephrolithotomy and suprapubic prostatectomy

Dr Simon Englander, Cleveland, read a paper on "Diverticulum of the Urethra" Discussed by Drs F W Robbins, Detroit, Arthur B Cecil, Los Angeles, David W MacKenzie, New York, Charles M McKenna, Chicago, and Simon Englander, Cleveland

Dr Carl C Warden, Ann Arbor, Mich, read a paper on "The Chemistry of the Gonococcus in Relation to Immunity and Therapeusis" Discussed by Drs E Schmidt, Chicago, E L Keyes, Jr, New York, Benjamin Gruskin, Chicago, Theodore Baker, Pittsburgh, John R Brown, Tacoma, Wash, Edwin Beer, New York, W Jones Wallace, Oklahoma City, Martin Krotoszyner, San Francisco, E G Crabtree, Boston, and Carl C Warden, Ann Arbor

Dr R B H Gradwohl, St Louis, read a paper on "The Hecht-Weinberg Test as a Control Over the Wassermann" Discussed by Drs M L Heidingsfeld, Cincinnati, A L Wolbarst, New York, Leland Boogher, St Louis, Carl C Warden, Ann Arbor, Benjamin Gruskin, Chicago, and R B H Gradwohl, St Louis

Wednesday, June 14—Morning

Dr Arthur B Cecil, Los Angeles, read a paper on "Reflex Urinary Retentions"

Dr Oswald W Lowsley, New York, read a paper on "Certain Obstructions at the Vesical Orifice"

These two papers were discussed by Drs H W Plaggemeyer, Detroit, H J Scherck, St Louis, Leland Boogher, St Louis, A J Crowell, Charlotte, N C, Paul M Pilcher, Brooklyn, Edward L Keyes, Jr, New York, Arthur B Cecil, Los Angeles, and Oswald W Lowsley, New York

Dr Granville MacGowan, Los Angeles, read a paper on "Cancer of the Prostate"

Drs Hugh H Young and William Frontz, Baltimore, read a paper on "Preliminary Treatment Before Prostatectomy in Unfavorable Cases"

Dr James A. Gardner, Buffalo, read a paper on "Postoperative Treatment of Patients Following Prostatectomy"

Dr J L Crenshaw, Rochester, Minn, read a paper on "Postoperative Complications Following Prostatectomy"

These four papers were discussed by Drs Paul M Pilcher, Brooklyn, A J Crowell, Charlotte, N C, William F Braasch, Rochester, Minn, Charles E Barnett, Fort Wayne, Ind, Martin Krotoszyner, San Francisco, William E Lower, Cleveland, David W MacKenzie, New York, Edwin Beer, New York, John T Geraghty, Baltimore, A W Nelson, Cincinnati, and Granville MacGowan, Los Angeles

Dr William E Lower, Cleveland, showed moving pictures illustrating suprapubic prostatectomy

Dr Edgar G Ballenger, Atlanta, Ga, showed moving pictures of various genito-urinary operations and procedures

Wednesday, June 14—Afternoon

Drs Ernest G Crabtree and Hugh Cabot, Boston, presented a paper on "Colon Bacillus Pyelonephritis Its Nature and Possible Prevention"

Dr William C Quinby, Baltimore, read a paper on "Pyelitis of Children"

These two papers were discussed by Drs Irvin S Koll, Chicago, Henry F Helmholz, Chicago, William F Braasch, Rochester, Minn, Granville MacGowan, Los Angeles, Edward L Keyes, Jr, New York, Edwin Beer, New York, E G Crabtree, Boston, and William C Quinby, Baltimore

Dr Herman L Kretschmer, Chicago, read a paper on "Hematuria A Clinical Study Based on Two Hundred Cases" Discussed by Drs William F Braasch, Rochester, Minn, Martin Krotoszyner, San Francisco, Charles M Harpster, Toledo, Ohio, R L Payne, Jr, Norfolk, Va, I Simons, Nashville, Tenn, and H L Kretschmer, Chicago

Dr John R Caulk, St. Louis, read a paper on "Ureteral Catheter Drainage in the Treatment of Renal Infections, with Special Reference to the Infected Hydronephrosis Complicating Pregnancy" Discussed by Drs Edwin Beer, New York, William F Braasch, Rochester, Minn, A J Crowell, Charlotte, N C, Martin Krotoszyner, San Francisco, Herman L Kretschmer, Chicago, F R Charlton, Indianapolis, and John R Caulk, St Louis

Thursday, June 15—Morning

The Chair announced the appointment of the following nominating committee Drs James A Gardner, Buffalo, John R Caulk, St Louis, and I S Koll, Chicago

Dr Edwin Beer, New York, read a paper on the "Surgical Therapy of Benign and Malignant Tumors of the Bladder" Discussed by Drs Edward L Keyes, Jr, New York, William F Braasch, Rochester, Minn, John A Hawkins, Pittsburgh, F R Charlton, Indianapolis, Louis E Schmidt, Chicago, Henry C Evans, Youngstown, Ohio, G Kolischer, Chicago, Frederick C Herrick, Cleveland, and Edwin Beer, New York.

Dr Gardner at this point read the report of the nominating committee, and the following officers were elected for the ensuing year chairman, Dr Hugh Cabot, Boston, vice chairman, Dr Carl Wheeler, Lexington, Ky, delegates, Dr Edward L Keyes, Jr, New York, alternate, Dr E O Smith, Cincinnati, secretary, Dr William F Braasch, Rochester, Minn

Dr Martin Krotoszyner, San Francisco, read a paper on the "Cystoscopic Diagnosis of Contracted Bladder" No discussion

Dr Henry G Bugbee, New York, read a paper on "Frequency of Urination in Women" Discussed by Drs John R Caulk, St Louis, Irvin S Koll, Chicago, A W Nelson, Cincinnati, Theodore Baker, Pittsburgh, Arthur B Cecil, Los Angeles, F R Charlton, Indianapolis, James A Gardner, Buffalo, Frederick W Robbins, Detroit, H J Scherck, St Louis, and Henry G Bugbee, New York.

Dr Daniel N Eisendrath, Chicago, read a paper on "Clinical Aspects of Ascending Renal Infection Based on Experimental Work" Discussed by Drs G Kolischer, Chicago, E O Smith, Cincinnati, Edwin Beer, New York, Irvin S Koll, Chicago, and Daniel N Eisendrath, Chicago

Dr Irvin S Koll, Chicago, read a paper on "Fat Transplantation in Renal and Prostatic Surgery" Discussed by Drs G Kolischer, Chicago, H J Scherck, St Louis, David W MacKenzie, New York, and Irvin S Koll, Chicago

Dr J Edward Burns Baltimore read a paper on "Further Observations on the Use of Thorium in Pyelography"

The discussion on this paper was postponed until the afternoon session

Thursday, June 15—Afternoon

Dr Burns' paper, read at the morning session, was discussed by Drs John T Geraghty Baltimore, William F Braasch, Rochester, Minn , Oswald S Lowsley, New York, E. O Smith, Cincinnati and J Edward Burns, Baltimore

Dr John T Geraghty Baltimore read a paper on the Role of Infection of Seminal Vesicles as a Cause of Persistent and Recurring Cystitis"

Dr A C. Stokes, Omaha read a paper on "Removal Versus Drainage of the Seminal Vesicles"

Dr Robert H Herbst Chicago, read a paper on "Seminal Vesicle Infections The Cause of Persistent Urethral Discharge Report of Cases

These three papers were discussed by Drs F O Smith Cincinnati, V D Lespinasse Chicago John R Brown Tacoma, Wash , Louis E. Schmidt, Chicago, and A C Stokes, Omaha

SECTION ON PATHOLOGY AND PHYSIOLOGY

Tuesday June 13—Afternoon

The section was called to order at 2 o'clock by the chairman, Dr F P Gay Berkeley, Calif

On account of the absence of Dr William Ophüls of San Francisco, a member of the Executive Committee, the chairman appointed Dr E P Lyon, Minneapolis, as the third member, and the Executive Committee was instructed to bring in nominations for section officers for the coming year

Dr Frederick P Gay, Berkeley, Calif., read the chairman's address, entitled 'The Infectious Diseases as a Field of Investigation in Pathology "

Dr Walter B Cannon, Boston, read a paper on "Results of Recent Studies on Some Ductless Glands'

Dr Walter W Boothby, Boston, read a paper on "The Clinical Significance of Metabolism Studies"

These two papers were discussed by Drs A J Carlson, Chicago, Emil Goetsch, Baltimore, and A J Carlson, Chicago

Dr A. J Carlson, Chicago, read a paper on "Hunger and Disease, with lantern demonstration Discussed by Drs G A. Friedman New York, Dr Walter B Cannon, Boston, A. W Cramer, and A J Carlson, Chicago

Dr H Gideon Wells Chicago read a paper on "Is Uric Acid Destroyed in the Human Body?' No discussion

Wednesday, June 14—Morning

Dr Victor C Vaughan, Ann Arbor Mich., read a paper on Additional Facts Concerning the Protein Poisons" Discussed by Drs Frederick P Gay, Berkeley Calif , R. C Brown , Milwaukee, Wis , F A Matthews Chicago, F M Pottenger, Monrovia, Calif , A. B Wadsworth, Albany, N Y , A W Crane, Kalamazoo, Mich , and Victor C. Vaughan, Ann Arbor Mich

In the absence of Dr Leila D Jackson, Chicago, her paper on "Experimental Scurvy in Guinea-Pigs Produced by Milk and Milk Products," was read by Dr J J Moore, Chicago Discussed by Drs Victor C Vaughan Ann Arbor, Mich , W W Ford, Baltimore, L R. Williams, Albany, N Y , and J J Moore, Chicago

Dr Orville T Manley, Cleveland, read a paper on "Tissue Transplantation with Reference to Permanence and Function" Discussed by Dr Robert T Morris, New York.

Dr James T Case, Battle Creek, Mich , read a paper on Roentgenologic Studies of the Gastro-Intestinal Tract in Diabetes" No discussion.

Wednesday, June 14—Afternoon

Dr Arthur H Sanford Rochester, Minn., read a paper on The Geographic Distribution of Amebiasis" No discussion

Dr Gatewood Chicago read a paper on 'Tuberculosis of the Mammary Gland No discussion

Dr Alfred S Warthin, Ann Arbor, Mich , read a paper on "Pathologic Changes in the Testes Produced by Syphilis, Leprosy, Typhoid Fever, Gonorrhea, Mumps and Roentgen Rays, with Comparative Study of These Lesions," with lantern demonstration Discussed by Drs W T Councilman Boston, Charles Koenigsberger, Lead, S D, and Alfred S Warthin, Ann Arbor, Mich

Thursday, June 15—Morning

The following officers were elected chairman, Dr James Ewing New York, vice chairman, Dr C W Green, Columbus, Mo , secretary, Dr Isabella C Herb, Chicago, executive committee, Dr William Ophüls, San Francisco, Dr A J Carlson, Chicago, and Dr F P Gay, Berkeley, Calif , delegate, Dr H Gideon Wells, Chicago, alternate, Dr Walter B Cannon, Boston

Dr James J Hogan, Vallejo, Calif , read a paper on "The Acute Delirium of Alcoholism" Discussed by Drs M H Fischer, Cincinnati, F A Matthews, Chicago, and James J *Hogan, Vallejo, Calif*

Dr Howard T Karsner, Cleveland, read a paper on "The Vascular Reactions of the Kidney in Experimental Acute Tartrate Nephritis" No discussion

Dr Arthur D Hirschfelder, Minneapolis, read a paper on "Studies on the Effects of Acids" Discussed by Dr Martin H Fischer, Cincinnati, and Arthur D Hirschfelder, Minneapolis

Dr Murlin, New York, read a paper on "The Relationship of the Stomach to the Intestinal Functions of the Pancreas" Discussed by Drs T R. Williams, Albany, N Y, and Murlin, New York.

THE REGISTRATION AT DETROIT

The total registration at the Detroit Session was 4,586 Below are given two summaries, one by sections and one by states

REGISTRATION BY SECTIONS

Practice of Medicine	1 477
Surgery General and Abdominal	1,043
Obstetrics Gynecology and Abdominal Surgery	317
Ophthalmology	301
Laryngology Otology and Rhinology	273
Diseases of Children	191
Pharmacology and Therapeutics	40
Pathology and Physiology	67
Stomatology	30
Nervous and Mental Diseases	140
Dermatology	79
Preventive Medicine and Public Health	139
Genito-Urinary Diseases	128
Hospitals	16
Orthopedic Surgery	68
Registrations without specifying any one section	277

REGISTRATION BY STATES

Alabama	5	New Jersey	24
Arizona	5	New Mexico	6
Arkansas	11	New York	306
California	75	North Carolina	10
Colorado	47	North Dakota	18
Connecticut	16	Ohio	648
Delaware	3	Oklahoma	31
District of Columbia	31	Oregon	10
Florida	9	Pennsylvania	309
Georgia	14	Rhode Island	16
Idaho	1	South Carolina	7
Illinois	411	South Dakota	9
Indiana	262	Tennessee	52
Iowa	96	Texas	39
Kentucky	38	Utah	3
Kansas	22	Vermont	3
Louisiana	16	Virginia	21
Maine	6	Washington	14
Maryland	49	West Virginia	29
Massachusetts	93	Wisconsin	100
Michigan	1306	Alaska	1
Minnesota	129	British Columbia	1
Mississippi	6	Canada	69
Missouri	139	China	3
Montana	14	Egypt	1
Nebraska	38	Norway	1
Nevada	5	Spain	1
New Hampshire	7		

Deaths

Frank Delos Gray, M D, Jersey City, N J, New York University, New York City, 1883, aged 58, a Fellow of the American Medical Association, president of the Medical Society of New Jersey in 1915, and formerly president of the Hudson County Medical Society, attending surgeon to Christ Hospital, Jersey City, and city physician and president of the Jersey City Board of Health, died in Christ Hospital, June 11, from the effects of a gunshot wound of the head, self-inflicted, it is believed, with suicidal intent while despondent on account of ill health

John T Montgomery, M D, Charleston, Ill, Northwestern University Medical School, Chicago, 1876, aged 63, a Fellow of the American Medical Association, a member of the Big Four Railway Surgeons Association, International Association of Railway Surgeons and Aesculapian Society of the Wabash Valley, founder and proprietor of the Charleston Sanitarium, local surgeon of the Big Four System and Mattoon and Charleston Interurban railroad, formerly president of the Illinois Fair Association, died at his home, June 14

Eligio Osuna, M D, Albuquerque, N M, School of Medicine of Nuevo Leon, Monterey, Mexico, 1891, aged 51, a Fellow of the American Medical Association, an esteemed practitioner of Albuquerque, Mexican consul in that city and a member of the Alianza Hispano-Americano, died at his home, June 2, from disease of the brain At a meeting of the Bernalillo County Medical Society, resolutions were adopted setting forth the uniform courtesy and ability of Dr Osuna and tendering the sympathy of the society to his stricken family

Willard Parker Worster, M D, New York City, College of Physicians and Surgeons in the City of New York, 1867, aged 73, a Fellow of the American Medical Association, instructor in hydrotherapy and clinical assistant in electrotherapeutics in the New York Post-Graduate Medical School and Hospital, a well-known roentgenologist, last surviving officer of the *Dunderberg*, a ram built for the United States Government by William H Webb and sold to the French Government in 1867, died at his home, June 7

Bartholomew E McKenzie, M D, Toronto, Ont, McGill University, Montreal, 1880, University of Toronto, 1889, Trinity Medical College, Toronto, 1890, aged 64, senior surgeon to the Orthopedic Hospital, Toronto, orthopedic surgeon to Grace Hospital, Toronto, and professor of clinical surgery in the Ontario Medical College for Women, Toronto, president of the American Orthopedic Association in 1905, died at Toronto, April 21, after an operation for disease of the intestines

Ernest Frothingham King, M D, Washington, D C, Howard University, Washington, D C, 1883, aged 57, a Fellow of the American Medical Association and a member of the American Urological Association, associate professor of surgery in George Washington University, Washington, D C, a specialist in diseases of the genito-urinary system, died in the Central Dispensary and Emergency Hospital, Washington, June 8, from atrophic cirrhosis of the liver

Allen Augustus Greene, M D, Anniston, Ala, Vanderbilt University, Nashville, Tenn, 1891, aged 45, formerly a Fellow of the American Medical Association, a member of the Medical Association of the State of Alabama, a specialist on diseases of the eye, ear, nose and throat, oculist to the Western Steel and Car Company and Louisville and Nashville railroad, died in St Luke's Hospital, Anniston, May 26, from heart disease

Simon Cooley Beede, M D, David City, Neb, State University of Iowa, Iowa City, 1891, aged 51, formerly a Fellow of the American Medical Association, a member of the Nebraska State Medical Association, Western Surgical and Gynecological Association and American Association of Railway Surgeons, a fellow of the American College of Surgeons, founder of the David City Hospital, died at his home, June 1

James Madison Boling, M D, Tulsa, Okla, Medical College of Georgia, Augusta, 1886, until two years ago a resident of Claremore, Okla, vice president of the Mid-Continent Trust Company, Muskogee, Okla, and a director of the Mid-Continent Life Insurance Company, a pioneer practitioner of Indian Territory, died in Barnes Hospital, St Louis, June 8

Frank Horton Foster, M D, New Carlisle, Ind, Indiana Medical College, Indianapolis, 1907, aged 45, while attempting to cross the tracks of the Chicago, Lake Shore and South Bend railroad at New Carlisle, in his automobile, June 4, was struck by an interurban car and received injuries from which he died a few hours later at Epworth Hospital, South Bend

James Elwood Stubbs, M D, Chicago, University of Pennsylvania, Philadelphia, 1864, aged 78, a member of the Illinois State Medical Society and Physicians' Club of Chicago, formerly professor of theory and practice of medicine in the Harvey Medical College, Chicago, died at his home, June 15, from cerebral hemorrhage

James Tyler Kent, M D, Stevensville, Mich, Eclectic Medical Institute, Cincinnati, 1871, Homeopathic Medical College of Missouri, St Louis, 1889, president of the Board of Trustees of Chicago Homeopathic Hospital and author of many books on homeopathic materia medica, died at his home, June 5, from nephritis

James Newton Nichols, M D, Bangs, Tex, Southern Methodist University, Dallas, Tex, 1912, aged 32, a member of the State Medical Association of Texas, for a year after his graduation an intern at St Paul's Sanatorium, Dallas, died at the family home, May 31

Francis M Lewis, M D, Little Rock, Ark., Memphis, Tenn, Hospital Medical College, 1899, aged 56, for thirty-five years a practitioner of Pulaski County, died in St Vincent's Infirmary, Little Rock, June 6, six days after an operation for appendicitis

Albert C Welch, M D, Weeping Water, Neb, University of Nebraska, Omaha, 1908, aged 62, a member of the Nebraska State Medical Association, died suddenly from heart disease while assisting in an operation near Weeping Water, June 2

Frederick Grant Bryden, M D, Morley, Colo, American Medical Missionary College, Chicago, 1901, aged 41, mine surgeon for the Colorado Fuel and Iron Company, was killed by the overturning of his automobile at Wooten, Colo, June 6

Arthur Justice Boren, M D, Byers, Kan, University of Kansas, Lawrence and Rosedale, 1910, aged 35, a member of the Kansas Medical Society, died at his home, June 3, from the effects of carbolic acid accidentally self-administered

Louis K Hirschl, M D, formerly of Davenport, Ia, University of Vienna, Austria, about 1880, aged 68, died in Bordighera, Italy, where he had practiced for thirty-five years, April 25, from kidney disease of long standing

Ida C Bender, M D, Buffalo, University of Buffalo, 1890, for thirty years a teacher of English and history in the Buffalo public schools and author of textbooks on these subjects, died at her home in Buffalo, June 11

Walter H Bills, M D, Allegan, Mich, Buffalo (N Y) University, 1870, aged 69, a member of the Michigan State Medical Society and for more than forty years a practitioner of Allegan, died at his home, June 10

Samuel Long, M D, New Brunswick, N J, Hahnemann Medical College, Philadelphia, 1873, aged 64, died at his home, June 12, from heart disease

Frank Atwater Elmes, M D, Derby, Conn, Yale University, New Haven, 1905, a Fellow of the American Medical Association, died at his home, May 20

Ira T Sage, Muncie, Ind (license, Indiana, 1899), aged 80, for many years a practitioner of Red Key, died at the home of his daughter in Muncie, May 26

William Cretcher Wren, M D, Welshfield, Ohio, Eclectic Medical Institute, Cincinnati, 1899, aged 41, died at his home from angina pectoris, May 22

Warren Carey, M D, LaGrange, Ill, Rush Medical College, 1883, aged 66, also a dentist, died at his home, June 5, from nervous breakdown

Richard Frank Delano, Providence, R. I (license, Rhode Island act of 1895), aged 54, committed suicide in his office by hanging, June 2

Dustan M Greeley, M D, Mt Carroll, Ill, Eclectic Medical Institute, Cincinnati, 1859, aged 81, died at his home, May 27

George Horton Tilden, M D, Boston, and Paris, France, Harvard Medical School, 1876, died in Paris, France, May 31

Lewis H Clark, M D, Decatur, Ill, Eclectic Medical Institute, Cincinnati, 1868, aged 71, died at his home, May 31

Sterling Triest Smith, M D, Dunlap, Tenn, University of Nashville, Tenn, 1858, aged 78, died at his home, May 21

The Propaganda for Reform

In This Department Appear Reports of the Council on Pharmacy and Chemistry and of the Association Laboratory Together with Other Matter Tending to Aid Intelligent Prescribing and to Oppose Medical Fraud on the Public and on the Profession

THE WINE OF CARDUI SUIT

(Continued from page 2025)

May 11, 1916, Afternoon

ARGUMENTS ON MOTION TO INSTRUCT FOR PLAINTIFF

Mr Hough —It the Court please At this stage of the trial it becomes necessary and proper to inquire to what extent, if at all, the defendants have justified In other words whether sufficient evidence has been presented under their plea of justification to justify the submission of any question to the jury

The Court —Whether any evidence has been produced which would justify the jury in basing a verdict on it?

Mr Walker —Yes if no other was introduced

Mr Hough —I take it that we may regard as settled the law that, in an action for libel where a plea of justification is filed, and the libelous article consists of many different libelous statements it is not sufficient to aver and prove a part of those libelous statements but they must allege the truth and prove or introduce evidence which constitutes prima facie evidence of proof of every single one of those libelous statements

That is the rule as laid down in Odgers and that is the rule as laid down in Newell the two books representing the English and American law on that subject.

In other words if there are ten libelous statements in a libelous article—

The Court —I do not think you need spend any time on that. If they have not justified as to everything, then there is something where the jury must find a verdict

Mr Hough enumerated the libelous statements in the article of which complaint was made in the plaintiff's declaration and which, he said, the defendants must prove These were that the Pattens were selling and making as a tonic Wine of Cardui, which is not a medicine at all but as a booze or tipple that the women who buy it, buy it for booze and consciously or unconsciously continue to use it for its alcoholic effect that the statements on the bottles, before the passage of the Food and Drugs Act, were false and fraudulent and that the Pattens knew that they were false and that all the changes in these statements, alleged to have been false and fraudulent in the article were made because of the Pure Food Act and because the Pattens knew that they were false that all the money that they obtained, was fraudulently obtained from sickly women who thought that they were getting a bona fide medicine when all they were getting was alcohol that one of the partners of this business used the tainted money to bribe the church for a position that the plaintiffs offered their advertisements to the church publications and that they were refused because the business was dirty, vicious and fraudulent that the Pattens knew that Wine of Cardui was utterly worthless as a medicine that the method and manner of selling it was itself fraudulent that the sale of the medicine in itself was vicious, and fraudulent

'Now those in substance, are the things which must be proven or at least, concerning which sufficient evidence must be introduced to the court which would justify the submission of that question to the jury"

The arguments were long taking up the greater part of two sittings It is not possible here to do more than give the points raised and an outline of the arguments thereon with the rulings of the Court

MEDICINAL VALUE OF WINE OF CARDUI MATTER OF FACT OR OF OPINION?

The first part of the argument opened with the question whether there was, in respect of the medicinal value of Wine of Cardui, any issue of fact which could be put before the jury Counsel for the plaintiff submitted that, taking the evidence as given by the defendants' own witnesses, there was only a matter of opinion, of difference in medical opinion Counsel cited Johnson's case (*U S* v *Johnson* 211 U S 488) in which the majority of the Supreme Court held that any effort of Congress to make a question, which was founded in opinion as distinguished from fact, a matter of fraud would be unconstitutional, this case was on the Sherley Amendment and counsel cited the judgment of C J Hughes to prove the nature of the discussion that had taken place between the judges in deliberation In support of the view that there was here matter of opinion and not of fact the presence of cnicus benedictus in several official pharmacopeias and its mention as a remedy for uterine disorders in four out of forty-eight treatises perused by Professor Sollmann as well as the wide spread employment of viburnum prunifolium until quite recently, if not at present, for the same purpose, were brought forward as showing that there was still a body of opinion, however small, that cnicus benedictus and viburnum prunifolium were proper medicines to administer in these conditions It was urged that even if the plaintiffs put on the stand as many expert witnesses as had the defendant and if these new expert witnesses testified that, in their opinion, these two drugs were proper drugs to use for the complaints for which they were recommended, this would not render the plaintiff's case any stronger than it was left by the evidence of the defendants own witnesses That is to say, that the latter have given evidence that, in their opinion these two drugs as combined in Wine of Cardui, are worthless

"At most that is a question of opinion, purely of opinion, and that is what the Supreme Court has meant when it said in the Johnson case and in the McAnulty case that there could be no charge of fraud based upon any such conditions.

"If the defendants in this case had come here and said in accordance with their first analysis, 'there is nothing in this medicine but alcohol and water, and a little coloring matter' and the witnesses had said 'there is nothing in this medicine' then it would have presented a fact to have been submitted to the jury

'I say in this case that that is the duty of the Court, since it has come out from their witnesses' testimony alone, that the matter was one of opinion it is the duty of the Court to direct a verdict to the effect that there can be no charge of fraud sustained on such evidence "

The Court —Well, on that proposition I am satisfied, Mr Hough, that there is evidence in this record which would justify this jury in finding that the medicine, as described here, was worthless as a matter of fact I am satisfied on that proposition All of these expressions of opinion are to be used by the jury solely for the purpose of reaching their conclusion on the question of fact We have had evidence that this synthetic medicine was absolutely worthless that is was worse than worthless that it was harmful We have listened to that here for the last six weeks, and that is the evidence in this case and it is evidence of fact, not of opinion

When you go to the jury the question will be whether or not Wine of Cardui is worthless, or of some therapeutic value They will be required to determine between the two sets of experts, which opinion is the right opinion When they render their verdict they will decide not a matter of opinion, but a question of fact

On that proposition I am against you, Mr Hough I think there is a question to go to the jury

THE QUESTION OF FRAUD

Mr Hough read from the record the following statement of the Court

"The jury will be instructed that fraud pre-supposes knowledge on the part of Mr Patten, and that they cannot find that it is a fraud and they cannot find the truth of this plea unless they find from the evidence that Mr Patten knew that this was a fraud ' (March 28)

Mr Hough —Now there are a number of other questions in the case.

The first one is as to the fraud That involves some evidence other than evidence of the worthlessness of the medicine That requires some evidence, I say, other evidence, opinion or otherwise, as to the worthlessness of the medicine, to justify the submission, to the jury, of the question as to whether the plaintiffs knew that it was worthless

Now I say, on that point, that there is not a scintilla of evidence on which this question should be submitted to the jury

But that is not the only point in the case There is not a scintilla of evidence upon which the question can be submitted to the jury as to whether the plaintiffs in this case, the Pattens, were intentionally selling this to be consumed as a booze instead of a medicine, and that is one of the charges in this case

Now your Honor may think that the evidence as to the worthlessness of the medicine is strongly in favor of the worthlessness of the medicine as a matter of fact, as distinguished from a matter of opinion, and yet that fact alone don't justify the submission of these other questions to the jury, because those facts, alone, do not establish a condition from which the jury would be justified in inferring that they knew it was worthless in the *first place, and secondly, that* they were intentionally selling it to be consumed as booze

Now, if there is no evidence from which the jury would be justified in drawing that inference, then notwithstanding there may be evidence to go to the jury as to the worthlessness of the medicine, the jury must be instructed that they must find for the plaintiff, because a plea of justification must be a complete plea of justification, and proof of justification must be complete as to every phase of the charge

The plea of justification, as they have it in this case, is that it is *true in all its meanings, interpretations and intendments* which may fairly and reasonably be drawn from it, and that they draw all these from it, and in the argument before this court they have taken the position that that is right and that they meant all those things and they were going to prove all those things What have they done? They have merely shown, if your Honor's view of the evidence is correct, merely shown that, in the opinion of some witnesses, the medicine is worthless

That falls far short of making a prima facie case upon any of the other phases of the libel, which are just as libelous as the statement that the medicine is worthless

There is the further charge that the plaintiffs have offered their advertisements to the church publications, and that they were refused, because those in charge of them knew that the business was fraudulent and worthless

The Court —I think we have had no evidence on that

Mr Hough —No evidence whatever on that subject

The Court —As to that branch of the case, you need not go into it

Mr Hough —Now, then, there is the further charge that the women who buy this medicine don't buy it—not only that the Pattens manufacture and sell it, intending that it shall be used as a booze, and knowing that it possesses no medicinal value—but that the women who buy it, buy it for booze, and not for its medicinal value

Now I say there is no evidence which justifies the submission of that question to the jury They have brought in five or six women concerning whom it has been said that they used it in excessive quantities or that, drinking it, they got drunk on it But there is not a word in the evidence which justifies the allegation in the libel that the women who buy it—meaning all the women, not five or six out of a million or two—but all the women who buy it, buy it for booze and not for its medicinal effect

On that charge alone your Honor is justified, nay, required by the law, to charge the jury that they must find for the plaintiffs

Now there is the further charge that Wine of Cardui, when taken as recommended, is intoxicating, and your Honor's evidence on that charge is that, when *taken as recommended,* it is not intoxicating

Now I think that roughly covers all the points that I care to raise I respectfully submit that whether there is sufficient evidence to go to the jury— So that, notwithstanding your Honor may think that the evidence is strong that the medicine is worthless as medicine, there are four or five points upon which there has been an utter failure or proof, under the plea of justification

The Court —You mean not what I may think, but what I may think the evidence tends to prove

Mr Hough —I mean what you think the evidence tends to prove

At this point Mr Walker made a formal motion to put on record that the argument was to have the Court instruct the jury to find a verdict in this case for the plaintiff After asking for permission for Mr Williams of Chattanooga to be heard on behalf of the plaintiff, Mr Walker followed along the same lines as Mr Hough After counsel had spoken for some time

The Court —If I were sitting over there with eleven of my friends, I would listen to you, Mr Walker, and be impressed with the argument, but it has not anything to do with the motion to take it from the jury on that point

Mr Walker —I am arguing the proposition to the court now that there not only is not evidence in any affirmative sense to show that Mr Patten or the Chattanooga Medicine Company put this out as a booze, sold it as such, did not believe it was therapeutically a medicine, or that they ever knew anybody was using it as a beverage There is no evidence And, on the contrary, there is evidence from the plaintiff in this case to justify its use as a medicine, and their belief in it That is the reason why I am quoting that proposition

ARGUMENT OF MR C J SCOFIELD

The question before the court now on this motion to direct a verdict for the plaintiff is whether or not there is any evidence in the record at this time tending to establish the defense of justification, that is, reasonably tending to establish it If there is, of course the question would be submitted by your Honor to the jury, otherwise it would not be submitted to the jury

Now, I have nothing to say with reference to the question as to whether or not there is evidence in the record tending to show, or authorizing the jury to pass upon the question as to whether Wine of Cardui, in the doses prescribed, is worthless for the—is a worthless compound for the purposes for which it is given or intended

I take it to be established that there is sufficient evidence in the record upon that question

Now, another question that is argued by the gentlemen on the other side is the question of fraud It is alleged here in this article that this is a fraud, a vicious fraud, and it is alleged that the business has been built on deceit There are some other statements of that kind

I would say, however, first upon this question, that the question before the Court and jury at this time is the partnership case I am not here contending that the case does not have standing in this court—without the allegation and proof of special damage, but I am saying that there is no allegation of special damage, and there is no proof of any damage whatever, except what might be inferred from the fact that this statement was made concerning the corporation, and that is the situation—concerning the partnership, I mean

Then, there is a serious question—but I do not wish to argue that at this time—as to whether, under the circumstances, even if they should succeed in overcoming our plea of justification, they would be entitled in this case to any verdict at all, under any circumstances There is a serious question as to whether or not, in the partnership case, where there is no allegation or proof of special damages, even though the statements that are made in connection with one of the partners—now unfortunately deceased—would be beyond what ought to be said under ordinary circumstances, supposing that to be true, as to whether or not that can be imparted into the partnership case and made a part of the partnership case, where there is no allegation or proof of any damage whatever

I have some authorities that sustain the theory that in that kind of a case there can be no recovery But I have a very strong charge and opinion which will be presented to your Honor at some time if you should desire to see it before the case is concluded—you might have read it—in a libel case, by Lord Chief Justice Cockburn, where the very question is raised as to whether or not in a case of this kind, even though strong language is used in speaking of the medicine, or in denunciation of the corporation of persons who are putting it out upon the community—even though strong language, strong and stronger than this may be used that it is immaterial, if the principal points in the case upon the pleas of justification or privilege—privilege there, as I remember—are in favor of the defendant

Mr Scofield then addressed the Court as to whether there was any evidence to be submitted to the jury as to the knowledge of the makers and vendors of Wine of Cardui of its real character and uses He argued that, on this point, inferences are as much evidence as the facts from which the inferences are drawn This gentleman had been selling Wine of Cardui for a period of ten years and there was evidence that it was absolutely worthless From this the jury had the right to infer, if it impressed their minds in that way, that the plaintiffs knew or ought to have known of the worthlessness of Wine of Cardui

The Court —Of course, it may be, it may all be a question for the jury—it is a question for the jury, as I look at it, to determine whether or not this medicine is worthless, and on your theory, probably it would also be a question for the jury to say whether on that evidence it may or may not demonstrate to their satisfaction, that the medicine is worthless—whether, assuming it was worthless, they would hold that the Pattens knew, or ought to have known it was worthless

I would say now it is not the kind of evidence that would warrant a conviction in a criminal case

Mr T J Scofield —Now then, I take it that in this particular case if the jury should find that it was absolutely worthless—that is a question for them to decide—that under the circumstances they would have a right to say whether or not on this record, those who were making and selling it did know it, or ought to have known the facts Of course, they may not have known it I do not know what their evidence upon that point will be

Counsel further argued that the jury would have the right to consider in connection with all the evidence of knowledge and fact, that after the articles were published the plaintiffs deleted from the Ladies' Home Treatment" certain matters showing that they at this time had obtained knowledge With regard to the Methodist Church journals and advertisements of Wine of Cardui Mr Scofield cited a case in support of the view that this matter might be treated as a secondary and subsidiary matter, and if the main statement was justified, that justified the libel On the question of the use of Wine of Cardui as a tipple, Mr Scofield said

"I will just read this part of the articles 'Wine of Cardui is one of those preparations that have more or less vogue among women who take their booze in the form of patent medicine, instead of whisky' More or less vogue—that is use among women who take their booze in the form of patent medicines instead of whisky I submit that the jury has before them evidence that tends to sustain that fact."

The Court —In other words, that the phrase "more or less" means some.

Mr T J Scofield —Yes, sir I take it to be so Now, it says this "This from a gentleman who was selling to unsuspecting women an alcoholic tonic under the claim that it was non-intoxicating"

Now, if it did contain the alcohol and if it was advertised as nonintoxicating, and if he knew that it was worthless, or to have known that it was worthless as medicine, that meets the requirements of the situation

Mr Scofield laid before the Court argument that there was evidence to go before the jury on each of the other particulars

May 12, 1916, Morning

ARGUMENT OF MR. WILLIAMS FOR THE PLAINTIFF

In order that your Honor may at least see (as I hope your Honor will see) that I am not deceiving myself regarding the situation at the present time I want to concede to begin with that there is proof here that our medicine Wine of Cardui is an utterly worthless medicine, that that has been proven at this stage of the proceeding I want to concede full faith and credit to every one of the gentlemen who have been on the stand pharmacologists, physiologists and therapeutists who have testified both as to questions of fact and as to matters of opinion

I want to concede further for the purpose of this argument that everyone of the witnesses who have been introduced on what we have called perhaps jocularly 'the booze phase of the litigation," are entitled to full faith and credit, and that every circumstance that they have related here to your Honor and the jury has occurred exactly as it has been stated to have occurred

Now starting with that assumption I think perhaps I am justified in saying that we have agreed with your Honor as to what has been proved or what there has been introduced tending to prove as to both of the propositions that the medicine itself is worthless, and that it has been used in isolated cases as a booze or tipple by men and in a few instances, perhaps has been used to excess by women who have started taking it as a medicine

Now my proposition, if your Honor please, and the first proposition is that, assuming that the proof here shows as a fact at the present stage that the medicine is worthless, that it has been proved to be worthless by those pharmacological tests and these other scientific tests that have been made since the institution of this suit and many of them just before the trial of the case, it nevertheless is a fact that we cannot ignore it seems to me that by the witnessess (not the same witnesses I mean with reference to the pharmacological tests perhaps), but by the defendants own witnesses it has been proved that both of the ingredients which are used in our medicine and relied on for the medicinal effect (carduus benedictus and viburnum prunifolium) are well recognized drugs in medicine That they have been used for a great many years, as one witness said, viburnum prunifolium for one hundred years, and carduus benedictus from time immemorial almost

Counsel cited Dr Sollmann's evidence as to the use and reputation of the two drugs

Now then, may it please your Honor those facts are facts in evidence just as much as the facts regarding the pharmacological tests and the physiological tests regarding the worthlessness of the medicine

It is true it seems to me, if we had brought this suit ten years ago these witnesses, or most of them, would have been on the stand for us

But as I say that simply illustrates, may it please your Honor, the fact that there is no foundation for the charge that the manufacturers of this medicine, Wine of Cardui, are guilty of practicing a wicked and vicious fraud on the innocent women of the country because they have not known what these gentlemen have discovered in these tests made within the last few weeks, and have not known of the fact that these gentlemen, who formerly were using one of the ingredients (viburnum prunifolium) have recently, in recent years, found out regarding it and have discarded it from their practice

Assuming that, are we to be charged by a public journal, circulating all through the United States, with practicing a vicious and wicked fraud perpetrating such a fraud on the innocent women of the country because we have not known that fact and because we may be behind the times? And because we may see fit to agree with the minority of the medical profession or with the minority of the authorities on useful drugs? Is it not in testimony here your Honor, that carduus benedictus is an official drug in all the European pharmacopeias?

The Court —You may go a little further and assume that the evidence shows that at certain periods of a woman's life that not only has this medicine no effect, but it is positively harmful. Now we have such evidence here, especially in the case of a young girl and especially in the case of women with certain diseases, the symptoms of which are treated of in the "Home Treatment for Women," the "Ladies' Almanac" and also the conditions of a woman at her menopause Now if that is true, if it is a fact that Wine of Cardui is a positive detriment to the health under those circumstances then is it not a vicious fraud for somebody to advertise that it will be of benefit in those cases? And isn't the bare statement of the fact some evidence of the intent of the people who put it out?

I think there is a great deal in what you say but that is something for the jury to say, and you are making just the kind of an argument to me that I would expect to be made to the jury, analyzing the evidence and asking them the question that they must determine, whether it is a worthless medicine or whether its use will lead to the cure of these disorders, whether the Pattens had a fraudulent intent, or a malicious intent at the time they sold the medicine, and sent out the literature

Mr Williams —Is it possible for your Honor to tell the jury that it would be a reasonable inference for them to draw from the facts now in proof that we were practicing a wicked and vicious fraud instead of making an honest mistake?

The Court —Why if you assume it to be a fact that this medicine is positively dangerous (and it has been so testified here) to give it to a young girl just reaching the age of puberty then I think there is no difficulty in my mind in saying that it is a question of fact for the jury to determine here I will say that any medicine that was harmful to a young girl reaching the age of puberty, or to a woman arriving at the change of life, which was advertised to be a benefit—might it not be said that it is a vicious fraud? In other words, if it was not going to be of positive benefit, it was a fraud to advertise that it would be, especially where the evidence shows that it not only was not a benefit, but a positive harm There is evidence to that effect here

Mr Williams —If the Journal had said

"This being so, this medicine ought not to be permitted to be marketed because it contains 20 per cent of alcohol and it is dangerous for the public to have a medicine that they can go to drug stores and buy without a prescription, with 20 per cent of alcohol in it"

Now that would not have made a libel *per se*

That would not question, may it please your Honor, our intent There has got to be some proof of intent, as the Court says in the Eckman case, where it undertakes to construe the McAnulty case

The Court —I think there is no question but what there must be some basis of fact from which the jury may find the intent or may legitimately infer it Now, even in criminal cases, where the law is construed very much more favorably to the defendant, the intent is often found from the general circumstances There must in a great many cases be proof of fraudulent or malicious intent Now, in a case of this kind, if we assume that these gentlemen have told the truth and that this is positively detrimental to women at certain ages, that it cannot do anything but harm, has the jury no right to infer the intent of people who send it out under the statement that it can do nothing but good?

The Court —It is peculiar in this case that—one phase of this case—deals with one of the greatest things in the world, human life, and the positive statements are made as to what this medicine will do Now, then, assume—we may assume I think legally, that the assertion of the truth of a thing presupposes some investigation and knowledge on the part of the person who makes the assertion

Now, in the face of the assertions made here about Wine of Cardui, we have the evidence uncontradicted that, no matter what the therapeutic value of the constituent drugs that go into this Wine of Cardui may be, that at certain times in a woman's life it not only is not beneficial, or has no beneficial effect, but it is a positive harm

Now it seems to me that, under those circumstances, the jury would have a right to infer that a man who states a fact as a fact which he ought to have known was not proved—that is to say on the evidence we have here, it is so obviously false, these statements, that they ought to have known it certainly there is evidence from which the jury could find their intent

Mr Williams —But, if your Honor please, there is not a word of proof that the plaintiffs in this law suit ever heard tell of any of the circumstances or incidents that have been related here on the witness stand, and even if they had, may it please your Honor, if they had known of isolated cases in the millions of cases in which it is in proof that this medicine has been sold—if they had known of a hundred isolated cases of that kind, would it be a matter that the jury could reasonably infer that they were intentionally selling it as a booze or tipple and working it off as a medicinal compound?

This affects the personal character, your Honor, a broad statement that these people are practicing a moral turpitude, that they are doing something that is as villainous and dishonorable and unrighteous as anything that could be conceived of That is the gist of this libel

It is not the worthlessness of the medicine It is not the fact that some people may use it indiscriminately, for that may be said of any medicine that is put out to the public, whether given by doctors on a prescription or not But just as the Court says in this Eckman case, intent is a question of fact to be proved and while, of course, the jury may be justified in inferring the fact of intent from the circumstances in each particular case, the proposition here is, can the circumstances of this case warrant the jury under those circumstances in saying that these people are practicing a wicked and vicious fraud If your Honor believes that, why I agree with your Honor that it is a question to be left to the jury

The Court —I have that feeling, Mr Williams, because the evidence here is overwhelming that this medicine will not do the things that it is advertised to do It also is overwhelming that, in a great many cases, it will do a positive harm Now the jury will be safeguarded by the instructions of the Court, when the instructions are given on this question of intent, and they will be told that this amounts practically to a criminal charge in a civil case, and that they will have to find not only by the preponderance of the evidence, but by a clear preponderance of the evidence that it is true, but it is my judgment at this time that this question has got to go to the jury

This involves a scientific subject. It involves the judgment of professional men, dealing, not with everyday affairs of human life, although human life is an everyday affair, and they could not have made these statements without investigation I should say that a man who makes indiscriminate assertions, positive assertions about a medical proposition, a man of standing and position, which gives his words weight, is certainly doing a wrongful act and under certain circumstances, a fraudulent act, if he speaks otherwise Now, when these statements are made by the Chattanooga Medicine Company, the people had a right to believe that they had investigated the subject, and had consulted physicians before making the statement, and were making statements of things that they knew to be true Now the evidence shows that they not only were not true, but could not have been true in a great many instances

Mr Williams argued to some length on that point of the libel which dealt with the refusal of the advertisements in the papers of the Methodist Episcopal Church

Mr Hough —I was going to say that notwithstanding I may think the Court's mind is made up, I would not feel that I would be doing my full duty by the Court if I did not call attention to that which, in my opinion, I think has not been sufficiently presented

We may assume, for the sake of the argument, that all the libelous statements in the matter set out in the declaration are reduced to three

First, that it is a fraud to recommend that this medicine be taken by a girl at puberty, or a woman at the menopause without reference to the medicinal ingredients of the drug, because it is a positive danger to those women at that time We will say that is one distinct libel

We may assume for the sake of the argument, that evidence has been introduced, uncontradicted evidence, sufficient to submit that question to the jury even though we eliminate from our thought and our minds the fact which is also brought out, that doctors do give medicines to those women at those times which contain as much alcohol as this, and therefore, that the plaintiffs would have a right to assume that if the doctors gave medicine containing alcohol, without any danger that there would be no danger in the alcohol in their medicine, assuming that there may be valuable ingredients to the herb

But eliminating that and assuming that that has been definitely established without contradiction, and in such a way as to cause any sane or reasonable man to know that he should not recommend any medicine at that time containing alcohol, that does not dispose of the other libel, which is just as emphatically asserted in the declaration

They have stated that the alcoholic item is a minor indictment That is what the article says, that it is a minor indictment The medicine is *per se* a fraud because it does not contain any medicinal ingredients whatever

Is proof of the fact that I am doing something fraudulent in recommending a medicine for particular women sufficient proof that the medicine itself is fraudulent, or, going a step further, is it sufficient proof from which a jury would be entitled to infer that I knew the medicine was absolutely worthless for all purposes?

I say there is no evidence from which that fact should be submitted to the jury, or upon which they would be entitled to draw that inference, because the foundation for belief has been introduced by the defendants themselves, notwithstanding, they may have proven that in the opinion of other witnesses it was absolutely worthless That don't go to the essential thing which is necessary in this case, so far as the worthlessness of the medicine is concerned

But that is not all There is the statement which is equally libelous if we will assume, for the sake of argument, that both of those things have been sufficiently established to submit them to the jury, that is sufficiently established to submit to the jury the question as to whether or not it was a fraud to recommend the medicine without reference to its merits, to certain women at certain times, that is, assuming that sufficient evidence has been introduced to submit that to the jury, as to whether or not the medicine was absolutely worthless, there still remains a very serious charge upon which no evidence whatever has been introduced, and that is, that the plaintiffs in this case were knowingly selling this to be used as a booze, intending it to be used as a booze

Now, is there any evidence which can be submitted to the jury, or which should be submitted to the jury on that charge I say, not a particle

The isolated cases showing that some people have taken this for its alcoholic effec don't bring the knowledge home to the plaintiffs in the case

It is in evidence that the plaintiffs, when they took charge of the business took charge of a business the reputation of which was supposed to have been established for the purpose for which it was being sold, but that they submitted the question to one of the finest doctors and chemists in this country for the purpose of eliminating the alcohol, as far as it was possible to do so Is that to be ignored in the question of establishing good faith? There is no contradiction of that whatever

So I say that if all the other questions can be merged into the two which I have first stated there still remains this other very serious charge which has not been met in any way, and upon which no evidence has been introduced upon which a jury would be entitled to say that they knew that the plaintiffs were selling it intending it to be used as a booze, and not as a medicine

The Court —Why, if you admit that the record shows that the medicine was worthless and had 20 per cent alcohol in it, and take into consideration the enormous sales of this company it must at least have been bought for some purpose and the jury would have a right to infer that the manufacturers knew what was in it

Mr Hough —It still might have been bought for the medicinal effect because it is in evidence in this case, that alcohol itself is a medicine and there is evidence to show, or at least nothing to justify them in assuming that it was not being sold to be used for its medicinal effect

The Court —I think there is some evidence here on which the jury could assume that this was sold purely for its alcoholic content.

Mr Hough —Now then I told your Honor that the Supreme Court of the United States since the passage of the Food and Drug Act had affirmed the McAnulty case and the principles of the McAnulty case That is in the case of the Eckman Alterative Company, wherein the Supreme Court said

(Reading from citation last noted)

The Court —I have not any quarrel with that ruling, and I could not have if I wanted to, because it is the Supreme Court of the United States but if the facts are assumed, as I believe here that the evidence at the present time shows that this was absolutely worthless, and that the plaintiff ought to have known it then you come strictly within the terms of the Eckman case.

Mr Hough —Providing there is not proof going hand in hand with it, that there are others who honestly believe in the merits of the chief ingredients of this medicine Now, when that goes hand in hand with it how can it be anything but a question of opinion? At any rate, it does not lay the foundation for the charge that the plaintiffs had no ground for belief in their medicine

The Court —It depends altogether on how you look at the evidence I think there is evidence to justify the jury in assuming that very thing How they look at it, when the balance of the evidence is in, is another proposition I shall let this case go to the jury, gentlemen Do you want to go on this morning?

Mr Hough —We are ready to go on.

To which ruling of the Court the plaintiffs etc. excepted

May 15, 1916, Morning

TESTIMONY OF MR. FRANCIS P MASON

The Court met pursuant to adjournment Mr Francis P Mason was called as a witness for the plaintiff in rebuttal

DIRECT EXAMINATION BY MR. HOUGH

Mr Francis P Mason testified that he is a chemical engineer residing in Winnetka, Ill He graduated in the University of Berne, in *Switzerland. He studied three years at* the Institution St Cry, France, three semesters at the Laboratory of Prof Fresenius at Weisbaden, one semester as private assistant to Prof Fresenius, three semesters at the University of Basel in Switzerland, three and a half semesters in the University of Berne in Switzerland, where he received his doctor's degree After graduation he spent one semester at the Polytechnicum at Carlsruhe, in Germany He returned to the United States and worked in various laboratories, spending one semester at the University of Chicago, as private research chemist During the last two months he has made a series of experiments attempting to determine the potency of Wine of Cardui These experiments were made in Chicago

The witness submitted a chart showing the results of his work He took measured amounts of Wine of Cardui and evaporated them at known temperature and to a known concentration In some of these experiments he used fresh extracts and in others extracts, after standing for three days These were injected into guinea-pigs in certain doses In the first case Wine of Cardui was measured and evaporated at body temperature, or below, to a concentration where one part of the extract was equivalent to 12 parts of the original Wine of Cardui Of this extract four drops were injected into the guinea-pig He stated that the animal was made ill and showed strong nervous symptoms, lasting about an hour The animal recovered In the next experiment a guinea-pig received 5 8 drops of this same extract after standing for three days This animal was only slightly ill and recovered completely In the next case an animal was given 24 drops of the extract evaporated to a concentration of one to 4 3 This animal died in seventeen minutes In the next experiment an animal received half of the dose given to the previously mentioned animal This guinea-pig died in 29 minutes The next animal received 24 drops of a fresh extract The concentration was 7 5, and the animal died three days later Mr Mason stated that after the evaporation was completed no alcohol was left in the solution

In the next experiment Wine of Cardui was evaporated to a paste The paste was diluted in water and injected into a guinea-pig to a concentration of one to 10 7 parts of water The animal was visibly ill, but in time recovered In the next series of experiments Wine of Cardui was evaporated to dryness at 212 F The dry extract was taken up with water in concentration of one to 6.25 Eleven drops of this were administered to a guinea-pig subcutaneously without symptoms The next day the guinea-pig received 24 drops more and showed no symptoms A fresh extract was then prepared by evaporating Wine of Cardui to dryness, adding water to make a concentration of one to 16 6 of this Sixteen drops were administered to a guinea-pig and it showed no *symptoms*

Q —Now what do these experiments show doctor? *A* —These experiments show quite clearly that Wine of Cardui contains an active *potent principle That upon removing the alcohol* the extract fresh has this potency and that upon standing for a certain period of time—

Q —When removing the alcohol at what temperature? *A* —At 98 Fahrenheit, that is body temperature. Upon standing though the potency of the active part of Wine of Cardui is injured It is no longer as strong as it was when first fresh prepared.

Q —You mean when standing without any preservative? *A* —As soon as the alcoholic protection is *removed from* the Wine of Cardui it seems to undergo some definite decomposition, because as I say after standing for three days two and a half times the dose that made the guinea pig very ill when it was fresh only made it slightly ill

It is also shown here by this chart, that evaporating the Wine of Cardui to paste form at blood temperature injures it, because as will be readily seen here a dose equivalent to 260 drops of Wine of Cardui evaporated under these conditions to a paste only made the animal ill and it recovered Whereas 56 drops of Wine of Cardui—

Mr T J Scofield —I do not think he ought to argue this matter He can state what he found

Mr Hough —He is stating a fact. This is not an argument He is stating what he found

Mr Walker —And what is a fact.

Mr Hough —Go ahead.

Mr T J Scofield —I think he is giving deductions from it, and I object to it.

The Court —Overruled

To which ruling of the Court the defendants etc. excepted.

Mr Hough *Q* —State what the chart shows. *A* —It shows here in the fresh paste experiment that 260 drops of Wine of Cardui do not affect the animal as much as 56 drops do where it is evaporated only to a concentration of one to 4 and administered fresh.

The last series of experiments shows that by evaporating at 212 degrees, there is practically no potency left at all, because 270 drops of Wine of Cardui treated in this fashion show no effect, as against the 56 drops that kill

Q —That is, where you say it is evaporated to dryness? *A* —That is where it is evaporated to dryness at 212 degrees Fahrenheit.

Mr Mason stated that he purchased the Wine of Cardui in the open market He also stated—after objection which was overruled—that he had read the analysis of Wine of Cardui in THE JOURNAL of the AMERICAN MEDICAL ASSOCIATION, and it was his belief that no one could state from that analysis what the material was from which the material was made

CROSS-EXAMINATION BY MR T J SCOFIELD

Mr Mason stated that he had not studied bacteriology seriously and that he had never studied pharmacology The animals on which he experimented seemed perfectly normal and healthy They were observed by himself and a Mr Devitt, who was a chemist, not a physician or a pharmacologist The animals were purchased at an animal store and were kept about a week before the experiments were begun The animals seemed normal

Q —How do you know they were normal, that is what I am trying to get at. Do you know anything about it? *A* —I know that a sick animal exhibits without fail certain symptoms that anybody who is accustomed to handling animals can recognize

Q —Have you had much experience in experiments on guinea pigs? *A* —I had at one time

Q —When was that? *A* —When I was assistant to Professor Stupple at the University of Berne

Q —How long ago was that? *A* —The summer of 1895

Q —What experience did you have there? *A* —We were working on snake venom, trying to isolate the active principle of snake venom

Q —How many pigs did you experiment on? *A* —We used various animals, cats, guinea pigs and rats

Q —How many did you experiment on? *A* —Oh perhaps 15 or 20

Q —Were they pharmacological experiments which you were conducing? *A* —In a way, yes

Q —Who was the pharmacologist? *A* —Beg pardon?

Q —Who was the pharmacologist? *A* —Well, Professor Stupple

Q —Now then, what did you mean by saying "in a way, yes"? *A* —Well, as I remember we made between 15 and 18 experiments on this isolated venom, that is, we made various consolidations and preparations of snake venom, and tried it on animals to see if the process would be the same or would do the same work as the fresh venom would

Q —Did you isolate the active principle of the venom, doctor? *A* —No, sir, we did not.

Q —Why didn't you do it? *A* —Because it does not seem that anybody has been able to do it, or at least not at that time they had not.

Q —What was that, class work? *A* —No, I was his private assistant.

Q —In making these experiments on the guinea pigs, what did you use, what sort of an instrument? *A* —I used what is called a serum syringe, belonging to Doctor Funck.

Q —How is that? *A* —A serum syringe, a glass syringe.

Q —Produced where? *A* —From Dr George W Funck.

Q —Will you describe, if you can, the manner in which that experiment is conducted with that instrument? *A* —Why, the system was this, as used in these experiments I prepared the extracts, measured them, and Dr Funck made the actual injection in all cases, except on pigs 7 and 8

Q —Who made the injection on pigs 7 and 8? *A* —I did

Q —Was anyone with you when they were made? *A* —Yes, sir

Q —Who? *A* —Mr Devitt.

Q —Did you use the same sort of an instrument on 7 and 8 that Dr Funck used on the others? *A* —We did.

Q —How did you prepare the instrument for use on 7 and 8? *A* —It was first boiled, that is, made sterile and filled with the extract. The guinea pig had its head and front paws stuck into a wide mouthed bottle, so that its hind legs were exposed The skin of the abdomen was sterilized with alcohol, and then pinched up and the needle inserted under the flap

Q —Do you know whether or not the instrument which you used there was sterile? *A* —I just told you it was boiled

Q —How do you know? *A* —Well, it was boiled, and boiling is supposed to sterilize anything

Q —Did you do it yourself? *A* —Why, yes, right there under my supervision

Q —How long did you boil it? *A* —About five minutes

Q —Will boiling an instrument of that kind for five minutes necessarily sterilize it? *A* —I suppose it does

Q —You suppose it does I asked you if you know? *A* —I understand that it is the regular method

Q —I am asking you if you know whether or not that sterilizes it? *A* —I know what the doctors have told me, and what I have read, that is all I did not make a bacteriological—

Q —Is it not a recognized fact that an instrument of that kind, in order to be sterilized, must be boiled 20 minutes? *A* —I do not know that.

Q —I asked you if it is not a recognized fact? *A* —I do not know

Q —You do not know whether it is or not? *A* —No

Q —Those instruments were boiled five minutes? *A* —About five minutes, yes

Q —If that is true, and if it is also true, in order to have perfect sterilization, that 20 minutes of boiling is required, you don't know whether those instruments were sterile or not? *A* —If they were not sterile by being boiled five minutes, I do not know If they were sterile after being boiled five minutes, I know they were sterile.

Mr Mason testified that the instruments used were sterilized by boiling The syringe was put into the animal under the skin of the abdomen The skin was carefully sponged off with strong alcohol The hair was not shaved off It was washed until it seemed perfectly clean The alcohol was left on He stated that no examinations were made of the animal after death He personally was not competent to do it He did not see the necessity of it Neither Dr Funck nor any one else made a postmortem of the animals He does not know what was the cause of death Tetanus may have been the cause of death The witness stated that his knowledge of the matter is limited The Court called to the attention of Mr Scofield that the witness has not qualified on these lines

The witness stated that in a way when he studied chemistry he studied the question of the potency of medicine or drugs For example, he attempted to recover poisons from the bodies of rats when working under Prof Fresenius The organs were examined by various methods of analysis

The witness stated that he does not know the effects of injecting protein into the guinea-pig He does not know anything about anaphylaxis or its symptoms He does not know the composition of the extract which he injected into the guinea-pig He has not calculated the amount of extract per kilogram of weight injected He wanted to find out whether the stuff would affect a guinea-pig at all

The witness testified that the amount of extract injected into the first guinea-pig represented five drops of Wine of Cardui He was asked to calculate how much it would represent for a person 150 pounds in weight Objection was made to the question and overruled

Mr T J Scofield *Q* —Let me ask you, Mr Mason, if it is not a fact, that, figured out in that way, it would require a dose of a gallon and a half to two gallons for a man of 150 pounds, or a woman 150 pounds in weight? *A* —Of Wine of Cardui?

Q —Yes? *A* —It would be a large quantity

Mr Hough —That is objected to

Mr T J Scofield —What did you say?

Mr Hough —It is objected to as wholly immaterial, because Wine of Cardui is not given to human beings in lethal doses, and it is not intended to be given in lethal doses, and therefore it does not make any difference how much they would have to get in order to get the same action as on a guinea-pig

Mr T J Scofield —This was not a lethal dose, because it did not kill the animal

THE COURT —There are a number of experiments here where the animal was only slightly influenced

Mr Hough —The sole purpose of this was to determine that, under certain conditions, it had a marked potency and under certain conditions it made the guinea-pig very ill, and under certain other conditions it killed the guinea-pig Now they can figure out how much that might take to kill an individual, or make them sick, but that is beside the question here entirely

THE COURT —I think it is quite important We are not interested, to be sure, in the guinea-pigs that are dead any more than that this medicine did bring it about possibly But as to those that are still alive, I think it is quite competent to show what proportion of the medicine that it took to make the small animal ill, what proportion that bears to the person weighing 150 pounds say, that is, provided it appears in any way that the proportion is probably true In other words, that the same effect will happen on a guinea-pig, as will happen on a human being

Mr Hough —We are not arguing from that, that a certain amount will kill a human being

THE COURT —As I understand Dr Mason's evidence, it is merely as to one single fact, that Wine of Cardui has some potency in it, at least as far as guinea-pigs are concerned

Mr T J Scofield —Now then, let the pending question be answered, your Honor

Q—I ask you Doctor if, calculated in that way the dose for a person 1 0 pounds in weight would not be about to a gallon and a half or two gallons?

The Court—The doctor said it would be a large quantity

The Witness—It would be a large quantity I am calculating it now if you wish me to I have not got the exact figures

The witness had no information as to what was in the Wine of Cardui with which he experimented except what was on the bottle He stated that he knows it contains carduus benedictus and viburnum prunifolium from the testimony given in the trial The guinea-pigs were all females

Q—You do not know what it was that you injected that produced the illness? A—It was the active potent principle of Wine of Cardui

Q—How do you know? A—Becau —

Q—What is the active potent principle? A—The thing that makes the guinea pigs ill and kills them

Q—What is the active potent principle of Wine of Cardui? A—Chemically?

Q—Yes? A—I do not know

Q—You do not know? A—No sir

Q—Well how do you know that it is potent then? A—Because guinea pigs die from it and are made ill by it

Q—May they not die from the protein? A—I do not know anything about protein I do not know how it would affect a guinea pig

Q—Is it not a well known fact, Mr Mason that when a protein matter is injected into an animal that they frequently die? A—I do not know

Q—You do not know? A—No sir

Q—Well now suppose you injected white of egg or material of that kind into a guinea pig will it live or die? A—I never did it and I do not know

Q—You do not know do you?

Mr Hough—That is objected to as not proper cross-examination

The Court—Objection sustained

To which ruling of the Court the defendants etc. excepted

The witness stated that he conducted the work described in the laboratory of H M Dewitt in the Rookery Building

REDIRECT EXAMINATION BY MR HOUGH

On redirect examination the witness testified that the same instruments were used for the injections in each case He stated that probably if it had been an infection that caused their death it would have caused the death of all of them, but he does not know Further questions along this line were objected to Objection was sustained

The witness stated that there was no infection manifested at the point of injection

RECROSS-EXAMINATION BY MR. SCOFIELD

The witness stated that there are many kinds of infections where there is absolutely nothing to indicate it on the surface

TESTIMONY OF DR. GEORGE W FUNCK

Dr George W Funck was called as a witness for the plaintiffs in rebuttal

DIRECT EXAMINATION BY MR. HOUGH

Dr George W Funck testified that he is a physician residing in Chicago He graduated from the University of Wisconsin and then took one year's postgraduate work there. He graduated in 1903 from Rush Medical College He is now Professor of and head of the Department of Therapeutics and Preventive Medicine at the Chicago College of Medicine and Surgery He stated that in the point of students this college has as many as any in Chicago It is the Medical Department of Valparaiso University

Dr Funck testified that he had done surgery and is familiar with the female genital organs He has been teaching in various schools for about ten years and formerly held a similar position at the Bennett Medical College.

He is a member of the Chicago Medical Society, Illinois State Medical Society the American Medical Association, and the Association of Military Surgeons of the United States

There was shown to the witness the charts previously shown to witnesses who testified for the defendant. The witness stated that the charts are approximately correct, but that the uterus is exaggerated somewhat He testified that the plaster cast shown by Dr De Lee is as closely correct as any that could be made

Q—Doctor would you say that uterine displacements are pathological that are unaccompanied by any symptoms such as would cause the woman discomfort pain or distress? A—That depends largely—

Mr T J Scofield—Let me hear that

A—It depends largely on the definition of pathological If we call everything pathological that deviates in the slightest degree from the normal then of course those deviations are pathological But, in the ordinary meaning of the term pathological, as applied by physicians I would hardly say that they are unless accompanied by some other change which does produce symptoms Or we might as well further specify by saying that if the deviation from the normal is not accompanied by symptoms ordinarily speaking we could hardly figure it as pathological Strictly speaking however it would be

Q—Under the heading of uterine displacement would you include prolapsus? A—Yes sir

Q—Now are there cases of uterine displacement, including prolapsus of the womb which can be treated without surgical operation? A—Certainly

Q—What would be the symptoms of a case of that character as a rule? A—Well usually the symptoms do not refer to the displacement but rather to the congestion and inflammation that accompany the displacement and it is the congestion and inflammation that accompany the displacement that produce the symptoms

Dr Funck stated that the great majority of cases of menstrual disturbances do not require surgical treatment He stated that there are ovarian troubles which do not require surgical treatment He stated that there are a very large number of remedial agencies employed for uterine displacements which do not require surgical treatment, including cases of prolapsus

The witness testified that viburnum prunifolium is employed extensively by nearly all practitioners of medicine. On objection the answer was stricken out The witness stated that viburnum prunifolium is indicated for all cases of prolapsus and ovarian trouble which cannot be treated surgically He stated that carduus benedictus is indicated for all cases which do not require surgical treatment

Dr Funck testified that if these two drugs were combined in one medicine we would get the combined action of the two, and as their action is similar we would get the synergistic action By this he means that the sum total of the action of the two drugs is more than we would expect by simply adding the action of the two together mathematically He testified that in his opinion the combination of these drugs in a preparation of 60 grains of one and six grains of the other—the latter being viburnum prunifolium—to the fluidounce with a 20 per cent solution of alcohol is a useful combination The alcohol is a negligible quantity, and physicians do not take it into consideration at all as contained in remedial agencies Mr Scofield moved to strike out the last part of the answer The Court stated that it was not responsive, and instructed the witness to answer "yes' or "no" The witness answered that the alcohol has no part in it.

Q—How would that medicine be of benefit in the various female diseases we have referred to which would not require an operation or which are not due to malformation? A—Why by its tonic action The two do not act toxically in the same way, though but they both have ultimately that effect.

Q—What is a medicinal tonic? A—A medicinal tonic is a drug or remedial agent or process that improves and increases the vitality of the body That may be either of the entire body or it may be of particular parts of the body

Q—Can the same medicine be both a sedative and a tonic? A—Yes sir

Q—What is the difference between a stimulant on the one hand and a sedative or a tonic on the other if there is a difference? A—All three terms are different. Each one refers to a different property By a muscular stimulant we understand a drug that causes the muscle to contract more powerfully than it would otherwise if a stimulant is applied to it. The term tonic has nothing to do with the contraction of the muscle It concerns itself with the vitality of that muscle improving and increasing the vitality of the muscle.

Q—Then would you say that a tonic had to have the power of contracting a muscle in order to be regarded as a tonic? A—In fact it would not be a tonic. It would be a stimulant. The correct term for a drug having that sort of action is a stimulant, not a tonic.

Q—What connection is there between the female generative organs and the breasts of a woman? A—Through the sympathetic nervous system the two are rather intimately related. It happens quite frequently that when there is some disorder of the female pelvis that the patient will feel it in the breasts as for instance inflammations and tumors, displacements and other diseases of the female pelvis are reflected in the breast and the reverse is likewise true.

Q—Is pituitrin a tonic? A—It is a stimulant.

Q—Is hanging breasts a disease or symptoms of a disease? A—Well I should say it was rather a symptom

Q—A symptom A—Yes. sir

Q—Doctor, is medicine ever given to a woman during pregnancy? *A*—Certainly

Q—For what condition? *A*—Well, in the first place, for all the conditions that the woman may suffer from when she is not pregnant, and, in addition to that, from some of the conditions that she might suffer of because of her pregnancy

Q—Is medicine given for symptoms connected with the menopause? *A*—Yes, sir

Q—And also at puberty? *A*—Certainly

Q—Would this medicine I have referred to, in that combination, be indicated for those conditions? *A*—That belongs to the general class of remedies that are used in all these conditions

Q—Doctor, is there any danger in giving to a woman at puberty, or during the menopause, a medicine of this character, which contains 20 per cent of alcohol, in doses of a tablespoonful two or four times a day? *A*—The alcohol is the negligible quantity

Q—Will you speak a little louder, doctor? Would that amount of alcohol have the effect of arousing the passions of a girl, taken in those doses? *A*—I cannot conceive of such a thing

Q—Does a negative pharmacologic test establish the fact that a medicine is worthless? *A*—If the negative test should include every possibility, then it might, but one or two or a half dozen tests certainly would not

Q—What is the difference between a positive and a negative pharmacologic test? *A*—Well, by positive test we mean that by trying the drug on some lower animal some result is obtained, by negative test, that no result is obtained, in the particular experiment

The witness stated that a female can determine for herself that she has amenorrhea and dysmenorrhea This is true of many female disturbances She might be suspicious that she had inflammation of the womb She could certainly tell that she had leukorrhea

The witness stated that he had read through the Home Treatment Book of the Chattanooga Medicine Company for 1913 He stated that the treatment therein described including Cardui, Black-Draught, antiseptic treatment, and diet and health treatment is a general average treatment for the conditions mentioned He stated that Wine of Cardui would be a method of treating the conditions described He stated that there are some cases of sterility which can be cured by use of medicine Even all cases where medicinal treatment by mouth would be indicated would not necessarily mean that the female would be relieved of her sterility, but it would be a method of treatment that is used, and occasionally it would be successful But, even if surgical treatment would be applied to sterility, in many cases it would fail

Attorneys for the defendants moved to strike out the answer as to the surgical portion of the answer The Court ruled that it may stand

Dr Funck testified that 20 per cent of alcohol in a medicinal compound, taken in tablespoonful doses three or four times a day, would not tend to create an alcoholic habit He stated that his knowledge of carduus benedictus is based on reading concerning this drug He has never used it in his practice

Q—Doctor, would you say that the mere fact that a drug is injected into the uterus, either inside or outside of the human body, is any proof that it would or would not affect the uterus in a sick woman, when given in the usual way through the mouth? *A*—No, sir, that is not proof

Q—Would you say that the fact that a drug injected into the body of an animal shows no change in respiration, pulse or blood pressure, is any evidence that it would have no effect upon a sick woman, when given in the usual way through the mouth? *A*—No, sir, that is not evidence

Dr Funck stated that the same syringe was used on all the guinea-pigs described by Mr Mason except one He stated that there were *no* symptoms of infection in any of the guinea-pigs The site of the injection of the guinea-pigs was washed with alcohol To all appearances the guinea-pigs were normal

Q—Doctor, how might a woman tell for herself that a pain in her side, back or head was due to some menstrual disturbance? *A*—Well if it occurred periodically at her—the time of her menstruation, she probably would figure that the cause of it was the menstrual disturbance or pelvic disorder

Q—Would that be a fairly accurate diagnosis? *A*—Reasonably so

CROSS-EXAMINATION BY MR T J SCOFIELD

Q—Doctor, you are not a pharmacologist, are you? *A*—Not so far as it concerns itself with doing the actual experiments

Q—Have you had any experience with work of that kind—much? *A*—Not much, no sir

Q—How much have you had of work of that kind? *A*—Very little at the time I attended medical school, and since then, not actually doing them, but watching—not the identical experiments, but similar experiments, at the Medical College

Q—Under whom were you, doctor, at that time? *A*—At that time, if I remember correctly, the Department of Pharmacology and Physiology were conducted together

Q—Well, under what professor? *A*—That was Loeb, Dr Loeb

Q—How do you spell that? *A*—L o e b

Q—And that was where, at Madison? *A*—No, that was at Rush

Q—At Rush? *A*—However, he did not do the—there were various instructors in the laboratory He did not do the laboratory work himself

Q—I suppose he himself never gave a course in it, did he, Professor Loeb? *A*—Sir?

Q—Did Loeb give a course in pharmacology, himself? *A*—No, but if I remember correctly, it was under his—in his department.

Q—Yes Well, do you remember who the person was that was in charge of the—of that particular work, under whom you studied? *A*—No, I don't

Q—Well, it was not, as a matter of fact—what year was that that you were in that college? *A*—Well, I graduated in 1903 Then that must have been about 1901, I think

Q—Well now, is it not a fact that there was no such course in Rush Medical College at that time? *A*—Well, they had courses on lower animals, especially on frogs However, as I say, it was conducted in the department of physiology

Q—Well, I am asking you if it is not true that at that time there was not a course on pharmacology, when you were in Rush Medical College? *A*—No separate course

Q—Well now, is it mentioned at all as a course that was pursued in those years, in that institution—a study? *A*—Whether it was labeled—I don't think it was labeled, "pharmacology"

Q—Well, what was it labeled, then? *A*—It was labeled Physiology

Q—When you say "labeled" what do you mean by that? *A*—Well, I mean registered, the name that was applied to it

Q—Well have you had any experience of that kind since you commenced work for the Chattanooga Medicine Company *A*—Not aside from what was done on these rabbits, here, strictly speaking—that is not in pharmacology—or, at least, it is very crude pharmacology

Dr Funck stated that the extractives used on the guinea-pigs were prepared by Mr Mason and Mr Devitt, he merely performed the injections

The witness stated that he is not working for the Chattanooga Medical Company outside of his testifying in the trial He has been advising the attorneys for the plaintiff during the course of the trial

The witness testified that he talked with Mr Hough before the trial and before he went to Chattanooga He testified that he is on a salary with the Chattanooga Medicine Co and that he has not practiced much since the beginning of the trial His salary requires his attendance on the trial

The witness testified that he is the same Dr Funck who was employed in the defense of the Jiroch Medical Co

Q—Doctor, referring to the question—to the subject of vaginitis in women, are you familiar with the condition known as vaginitis? *A*—Yes, sir

Q—Do you agree with the statement in Cardui Home Treatment, which is as follows "The most frequent cause of vaginitis is gonorrhea" Do you agree with that? *A*—Well, that depends entirely on what statistics are taken to base that opinion upon In the—

Q—I am not asking you what they base it upon. I am asking you if you agree with that, in your views—

Mr Hough—One minute I object to the interruption of the witness Let him finish his statement

The Court—Go ahead

Mr Hough—Finish your first answer, Doctor

Mr T J Scofield—I object to Mr Hough directing the witness to do anything I am asking him whether he agrees with that statement

The Court—It depends altogether on whose heifer gets gored You object when Mr Hough is examining a witness, that he does not let him answer Now, Mr Hough objects for the same reason, that you will not let him finish

Mr T J Scofield—I was asking him—

The Court—He can finish his answer

Mr Walker—The Court said he could finish

Mr T J Scofield—Mr Walker, I am not at all deaf I recognize the Court's authority, and what he said

Mr Walker—Did you?

Mr Hough—Finish the answer you commenced

The Witness—It depends upon what statistics you take In the experience of one physician, practicing in certain places, it might be very frequent, and then again in the experience of another physician practicing among a different class of people, it might be comparatively rare You can get statistics either way

The Court—Now, Doctor—please read the question, Mr Reporter, and then let this explanation stand, but just answer the question

Mr T J Scofield *Q*—Do you agree with the statement in Cardui Home Treatment, as follows, quoting from the Home Treatment 'The most frequent cause of vaginitis is gonorrhea" Do you agree with that?

Mr Hough —Now, I object to the question, because it is not a correct statement of the Home Treatment Book It is a part of the statement And he is entitled to ask him the entire statement

(Handing book to Court.)

Mr Hough —There are a number of different causes—

The Court —Read the three lines to him, Mr Scofield I think that is proper

Mr T J Scofield —Why, surely Then I will modify the question as follows

Q —Do you agree with the statement in Cardui Home Treatment as follows The most frequent cause of vaginitis is gonorrhea brought on by infection sexual excess or unhealthy discharge from the womb ovaries, tubes or bladder? *A* —I think—

Q —Do you agree with that? *A* —In a general way yes. I think that probably most cases of vaginitis are due to some sort of discharge from the uterus

Q —What is gonorrhea? Is it a germ disease or not? *A* —It is an infection caused by a micro-organism

Q —Now then I will ask you—you agree then with that statement of the Home Treatment do you? *A* —*I don t know just exactly what* the statistics are as to the relative frequency but as a general proposition yes.

Q —I am not asking you— *A* —Especially when taken into consideration with a discharge from the uterus

Q —I am not asking you anything about statistics. I am asking you whether or not you agree that this is or is not true? *A* —The only way I can determine the relative frequency of the various causes of vaginitis is by referring to the statistics.

The Court —May I take the book Mr Hough?

Mr T J Scofield —Have you had any—

The Court —Just a minute Mr Scofield Will you be good enough to read the second paragraph there That is practically the question

(Handing book to witness.)

The Witness —There might be an objection made there to saying unhealthy discharges from the bladder probably There are not very many cases of vaginitis produced by unhealthy discharges from the bladder It is possible

Mr T J Scofield —Very well

Q —Now doctor you do agree that sometimes it comes from gonorrhea do you? *A* —Yes sir

Q —Very well Doctor Will you tell the jury your opinion as professor of materia medica and therapeutics in the Chicago College of Medicine and Surgery as to whether the use of a medicinal solution which contains the equivalent of 96 drops of whisky to each dose would be a scientific and a specific remedy with a curative effect in the treatment of gonorrheal vaginitis? *A* —It would be one of the methods of treatment and when taken along with the rest of the treatment as outlined in the Home Treatment Book it would be all right.

Q —Now then, doctor will you please answer the question I am not asking you whether it would be one of the treatments or not I am asking you whether the use of a medicinal solution which contains the equivalent of 96 drops of whiskey to each dose three or four times a day would be a scientific and a specific remedy with a curative effect in the treatment of gonorrheal vaginitis? *A* —Yes sir—the amount of alcohol we consider is—

Q —I am just asking you if you consider that is a specific and proper treatment? *A* —Yes sir

Mr T J Scofield —Well, that is all for you Dr Funck.

Whereupon the further hearing of the case was adjourned until 2 o clock p m of the same day, Monday, May 15, 1916

(To be continued)

Accident Statistics —German statistics show that from 1901 to 1911 there was a decrease in accidents causing death and partial or total permanent disability, but that there was a marked increase in accidents causing temporary disablement, lasting more than thirteen weeks The increase of accidents is particularly due to the following causes stricter control in regard to reporting accidents, employment of untrained and inexperienced workmen, more frequent prosecutions of claims by injured persons because of their better knowledge of the law, better knowledge of what is an industrial accident, increase of the cases in which the officials of the insurance system admitted a causal connection between existing malady or weakness and its aggravation by an accident, frequent granting of a transitory or accustoming pension, in cases where strictly speaking there was no longer a loss of earning power, and, finally the frequency of changes in the personnel of the laboring forces of the plants —Price, The Modern Factory

Correspondence

"Stammering" and "Stuttering"

To the Editor —May I call attention to the increase in the confusion in regard to stammering by the effort to substitute German usage (Fletcher, J M The Etiology of Stuttering The Journal A M A, April 8, 1916, p 1079) for our well established English words "stammering" and stuttering'?

Dr F A Bryant, writing under date of *1913*, says

> The Century Dictionary and Cyclopedia" explains the terms by stating that he who stammers has great difficulty in uttering anything *the result is broken and* inarticulate sounds that seem to stick in the mouth and sometimes complete suppression of voice He who stutters makes sounds that are not what he desires to make, and the result is a quick repetition of some one sound that is initial in a word that the person desires to utter, as c c c catch' *This is the attitude* taken by every writer on the subject whose views have appeared in English in the last fifty or more years with one exception

*Accurate definitions are one of the fundamentals of scien*tific investigation Let us consider briefly some of the confusion which will be caused by adopting this single exception instead of a 50-year-old rule recognized by the whole English speaking race

The German word *Stottern* is equivalent to the English word "stammering" On this account it is proposed to use the English word "stuttering" in place of "stammering" In short it is a proposal to abandon the established use of two important English words in order to use one of them in the sense of a somewhat similar German word This unreasonable proposal has already caused so much confusion that no discussion of speech defects is now clear unless it is accompanied by definitions of the words "stuttering" and "stammering"

It will take decades to make the substitution, if it can be made at all Every one who has to do with the subject must keep two meanings in mind, and even then much of what he reads will be uncertain And when the change is made, what has been written up to date will be unintelligible

A necessary consequence of this substitution of "stuttering' for 'stammering' will be the use of "stammering" with the meaning of the German word *Stammeln*, baby talk. That is, we must use a word which formerly distinctly designated a speech disorder to designate a great variety of defects in pronunciation Then lisping will be stammering, and we shall have no word for stuttering that is, clear repetition But we will have it, for stuttering is firmly fixed in the language, it is used in mechanics to designate the irregular chattering of a nonlubricated sliding member For nonspasmodic speech repetition we shall have to introduce a word, and it will always conflict with the old meaning of the word "stutter"

If America is to win any real distinction in the investigation of the leading speech disorder, it must progress at a more rapid rate than it has done, and it cannot make rapid progress by introducing a confusion of tongues

Ernest Tompkins, Los Angeles

Cataractous Families

To the Editor —Previously I have reported in The Journal seven cases that seemed to indicate hereditary tendency to cataract in some families

I operated lately on Mrs T, aged 51, for cataract in the right eye that had been forming for four or five years Recently the left eye became blind from the same cause

Just twenty-one years ago I had operated on this patient's mother, who was blind in both eyes from cataract, and who was then 54 years old Her mother, the present patient s grandmother, was blind from double cataract when she died at 65 A full cousin of the present patient, a *daughter of her* mother's sister, was blind from cataract when she died of an acute disease at 50 So this is evidently another cataractous family

John L Dickey, A.M., M.D., Wheeling, W Va.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

Alabama Montgomery, July 10 Chairman, Dr W H Sanders, Montgomery

Alaska Juneau, July 5 Sec, Dr H C De Vighne, Juneau

Arizona Phoenix, July 5 6 Sec, Dr John Wix Thomas, 306 Goodrich Building, Phoenix

California San Francisco, June 27 Sec, Dr Charles B Pinkham, R 527 Forum Bldg, Sacramento

Colorado Denver, July 4 Sec, Dr David A Strickler, 612 Empire Bldg, Denver

Connecticut Regular, New Haven, July 11 12 Sec, Dr Charles A Tuttle 196 York St, New Haven, Homeopathic, New Haven, July 11, Sec, Dr Edwin C M Hall, 82 Grand Ave, New Haven Eclectic, New Haven, July 11, Sec, Dr T S Hodge, 19 Main St, Torrington

District of Columbia Washington, July 11 13 Sec, Dr Edgar P Copeland, The Rockingham

Indiana Indianapolis, July 11 13 Sec, Dr W T Gott, 84 State House, Indianapolis

Maine Augusta, July 6 7 Sec, Dr Frank W Searle, 776 Congress St, Portland

Massachusetts Boston, July 11 13 Sec, Dr Walter P Bowers, 1 Beacon St, Boston

New Hampshire Concord, June 26 27 Sec, Dr W T Crosby, The Beacon, Manchester

New Mexico Santa Fe, July 10 Sec, Dr W E Kaser, East Las Vegas

New York Albany, Buffalo, New York and Syracuse, June 27 30 Chief Examinations Division, Mr Harlan H Horner, State Education Bldg, Albany

North Carolina Raleigh, June 27 30 Sec, Dr H A Royster, Raleigh

North Dakota Grand Forks, July 4 Sec, Dr G M Williamson, Grand Forks

Oklahoma Oklahoma City, July 11 Sec, Dr R V Smith, 502 Daniel Bldg, Tulsa

Oregon Portland, July 5 7 Sec, Dr L H Hamilton, Medical Bldg, Portland

Pennsylvania Philadelphia and Pittsburgh, July 11 13 Sec, Mr Nathan C Schaeffer, Department of Public Instruction, Harrisburg

Rhode Island Providence, July 6 7 Sec, Dr Gardner T Swarts, Room 313 State House, Providence

South Dakota Deadwood, July 11 Sec, Dr Park B Jenkins, Waubay

Texas San Antonio, June 27-29 Sec, Dr John S McCelvey, Temple State Bank Bldg, Temple

Utah Salt Lake City, July 3 Sec, Dr G F Harding, 407 Templeton Bldg, Salt Lake City

Vermont Burlington, July 11 13 Sec, Dr W Scott Nay, Underhill

Washington Tacoma, July 4 Sec, Dr C N Suttner, Walla Walla

West Virginia Charleston, July 11 Dr S L Jepson, Charleston

Wisconsin Milwaukee, June 27 29 Sec, Dr J M Dodd, 220 E 2d St, Ashland

Florida December Report

Dr E W Warren, secretary of the Regular Board of Medical Examiners of the State of Florida, reports the written examination held at Jacksonville, Dec 7-8, 1915 The total number of subjects examined in was 7, total number of questions asked, 70, percentage required to pass, 75 The total number of candidates examined was 26, of whom 13 passed and 13 failed The following colleges were represented

PASSED College	Year Grad	Per Cent
College of Physicians and Surgeons, Keokuk	(1881)	64 4*
Kentucky School of Medicine	(1904)	83
University of Louisville	(1915)	76 3
Tulane University of Louisiana	(1914) 82, (1915)	84, 89
Baltimore Medical College	(1903)	79 3
Johns Hopkins University	(1913)	90
College of Physicians and Surgeons, Boston	(1913)	81 5
Bellevue Hospital Medical College	(1881)	71 3*
Miami Medical College	(1880)	73 6*
Medical College of the State of South Carolina	(1915)	82
Meharry Medical College	(1915)	75
FAILED		
Birmingham Medical College	(1915)	53 3
Atlanta College of Physicians and Surgeons	(1911)	73 5
Atlanta Medical College	(1914)	73 5
University of Georgia	(1915)	73 6
Bennett Medical College	(1914)	67 2
Rush Medical College	(1899)	63
Hospital College of Medicine, Louisville	(1896)	53 6
Saginaw Valley Medical College	(1903)	45 2
Meharry Medical College	(1914) 51 5, (1915)	55, 67
University of the South	(1901)	62 1
Vanderbilt University	(1915)	73 2

* Credit allowed for years of practice

The following questions were asked

CHEMISTRY

1 Describe Marsh's test for arsenic 2 What does the presence of an abnormal quantity of chlorin in drinking water indicate? 3 To what salts do most cathartic mineral waters owe their virtue? 4 What is the chemical antidote of mercuric chlorid and what is the treatment in case of poisoning? 5 What is the chemical treatment for carbolic acid poisoning? 6 What is formed when chloral is heated with caustic potash? 7 Define valence 8 Mention six elementary substances commonly used in their pure state in medicine 9 Describe two tests for albumin in urine 10 Mention some substances used for disinfection after the prevalence of contagious diseases, and explain their action

MATERIA MEDICA AND THERAPEUTICS

1 Give the therapeutic management of acute nephritis with edema 2 Give some indications for employment of rectal alimentation, and what agents you regard as of value when thus employed 3 In what class of anemias is iron indicated? Give reason for your answer 4 Therapeutic management of acute chorea 5 Write three prescriptions each of which shall contain two or more ingredients for (*a*) 6 ounces of a solution (stimulating expectorant), (*b*) 8 powders (anthelmintic), (*c*) 8 ounces of an emulsion (50 per cent. cod liver oil) 6 Give therapeutic management of acute pyelitis in a child 3 years of age 7 Describe the physiologic action of antitoxins 8 Describe the physiologic action of vaccines, and under what conditions would you employ them 9 Give preparations and uses of ipecac 10 State the advantages and disadvantages of the use of condensed milk as a food for infants

SURGERY

1 Give the symptoms in the order of their occurrence in a case of empyema *Give your treatment of a case 2 Describe in detail a thigh* amputation at the junction of the lower and the middle third 3 Give technic for intravenous administration of salvarsan 4 Describe operation for intestinal anastomosis, illustrating, by drawing, the sutures used 5 Name the causes for gangrene of fingers and toes 6 (*a*) Give your treatment of fractures involving the elbow joint, (*b*) Why is nonunion so common in cases of fractures of the condyles of the humerus? 7 Give the diagnosis and treatment of a knee joint infected with the Neisser bacillus 8 Give your treatment of a case of cervical tubercular adenitis 9 Describe the reduction of a subcoracoid dislocation of the humerus 10 Give treatment for a burn of the second degree involving the elbow joint in a child

OBSTETRICS

1 Describe the fetal circulation and state the changes that take place after birth 2 Give symptoms of pregnancy and their relative importance 3 What is "morning sickness?" Give its etiology duration and treatment 4 How would you determine the position of the fetus previous to labor? 5 How would you manage a case of labor with the occiput in the hollow of the sacrum? 6 What is the treatment in retained secundines after abortion? 7 Give differential diagnosis of ectopic gestation 8 Give etiology, symptoms and treatment of inversion of uterus 9 What conditions justify induction of premature labor, and how is it best done? 10 What is the "Abderhalden test" and its significance?

GYNECOLOGY

1 Trace the blood and nerve supply to the uterus and appendages 2 Give the true anatomic relations of the normal uterus to the adjacent viscera 3 Describe and differentiate two benign and two malignant forms of tumor 4 What is the difference between a flexion, a version and a prolapse of the uterus? 5 Give the means of diagnosis and a description of the progress of a case of gonorrhea in the female 6 Give the technic of securing a sample of urine from each kidney separately 7 In what class of cases would you suspect a phimosis of the clitoris, and how would you relieve it? 8 How would you differentiate between a pus abscess of the tube and an extra uterine pregnancy? 9 Give in detail a recognized theory of the cause and progress of menstruation 10 What would be the indications for the removal of the ovaries, and why should we conserve in operating on them?

PHYSIOLOGY

1 What is the composition of normal blood? State its function 2 What causes the coagulation of the blood? Why does it not clot within the blood vessels? 3 State the events that occur during a complete cardiac cycle 4 What is the most plausible theory as to the cause of the heart beat? 5 What is the cause of the first respiratory movement after birth? Define the terms dyspnea, hyperpnea, apnea 6 What is an enzyme? Name five of the most important ones, giving an example of each, and their functions 7 Describe the normal mechanism *of the secretion of the gastric juice*, and state what circumstances favor gastric digestion 8 State the influence of the blood circulation on the secretion of urine Explain the effect of the division of the renal nerves on the secretion of urine 9 Describe the physiologic changes that take place in the uterine muscles during pregnancy and puerperium 10 What is the function of the thyroid gland? What effect does its removal have?

ANATOMY

1 What is the solar plexus? 2 Describe minutely the ovary 3 What is the celiac axis? 4 What muscles form the calf of the leg? 5 Give the blood supply of the appendix 6 Locate the portal vein and tell into what it empties 7 Name the different classes of joints, of bones, and give an example of each 8 Describe the greater omentum 9 Give blood supply of kidney 10 Name the muscles concerned in mastication

Washington January Report

Dr C N Suttner, secretary of the Board of Medical Examiners of Washington, reports the written examination held at Spokane, Jan 4-7, 1916 The total number of subjects examined in was 11, total number of questions asked, 110, percentage required to pass, 75 The total number of candidates examined was 29, of whom 22 passed, including 1 osteopath, and 7 failed, including 3 osteopaths and 1 chiropractor The following colleges were represented

PASSED College	Year Grad	Total No Examined
College of Phys and Surgs., Los Angeles	(1915)	1
Chicago College of Med and Surg	(1912)	1

Rush Medical College		(1898)	1
University of Illinois	(1914)	(1915)	2
College of Phys and Surgs Baltimore		(1882)	1
University of Maryland		(1915)	1
Harvard University		(1913)	1
University of Minnesota		(1905)	1
St. Louis University		(1905)	1
University of Oregon		(1914)	1
Jefferson Medical College	(1912)	(1914)	2
University of Pennsylvania		(1914)	1
University of Pittsburgh		(1911)	1
University of Toronto		(1913)	1
Western Reserve University		(1914)	1
University of Munich		(1903)	1
Medical School of Nagasaki	(1904)	(1911)	2
Tohoku Imperial University, Sendai		(1908)	1
FAILED			
Rush Medical College		(1892)	2
Northwestern Medical College St Joseph		(1888)	1

Wisconsin January Report

Dr T J Dodd secretary of the Wisconsin State Board of Medical Examiners, reports the oral, practical and written examination held at Madison January 11-13, 1916 The total number of subjects examined in was 17, total number of questions asked 98, percentage required to pass, 75 The total number of candidates examined was 14 of whom 10 passed and 4 failed One candidate's license was held for further consideration Twenty-three candidates including 2 osteopaths, were licensed through reciprocity The following colleges were represented

PASSED

College		Year Grad	Per Cent.
George Washington University		(1915)	86
Chicago College of Medicine and Surgery		(1915)	77 77 79
Syracuse University		(1913)	81
Medical Chirurgical Coll of Philadelphia	(1914) 89	(1915)	89
University of Pennsylvania	(1905) 93	(1913)	89
Meharry Medical College		(1903)	75

FAILED

College		Year Grad	Per Cent.
Chicago College of Medicine and Surgery	(1910) 61 (1914) 64 69	(1915)	71

LICENSED THROUGH RECIPROCITY

College		Year Grad	Reciprocity with
University of Arkansas		(1911)	Arkansas
Denver and Gross College of Medicine		(1907)	Illinois
College of Physicians and Surgeons Chicago		(1905) (1908)	N Dakota Illinois
College of Med and Surg Chicago (Physio Med)		(1911)*	Tennessee
Chicago College of Medicine and Surgery		(1912)	Illinois
Dearborn Medical College		(1906)	Illinois
Hahnemann Medical College and Hospital Chicago		(1913)	Nebraska
Jenner Medical College		(1906)	Illinois
Northwestern University		(1902)	Illinois
Rush Medical College	(1903)	(1914)	Illinois
University of Louisville		(1913)	Kentucky
Boston University		(1904)	Illinois
University of Michigan Medical School		(1898)	Michigan
University of Michigan Homeo Medical School		(1905)	Michigan
Ensworth Medical College		(1904)	Missouri
Washington University		(1911)	Kansas
Homeopathic Hospital College Cleveland		(1887)	Ohio
Starling Medical College		(1884)	Illinois
Queen s University		(1905)	New York

* Graduation not verified.

Kansas February Report

Dr H A Dykes secretary of the Kansas State Board of Medical Registration and Examination reports the written examination held at Topeka, Feb 8-10 1916 The total number of subjects examined in was 10, total number of questions asked 100 percentage required to pass 75 The total number of candidates examined was 5 all of whom passed The following colleges were represented

PASSED

College	Year Grad.	Per Cent.
Howard University	(1915)	76, 79
Hahnemann Medical College and Hospital Chicago	(1915)	91
St. Louis University	(1915)	80
John A. Creighton Medical College	(1912)	81

Iowa February Report

Dr Guilford H Sumner, Secretary of the Iowa State Board of Medical Examiners, reports the written examination held at Des Moines Feb 8-10, 1916 The total number of subjects examined in was 8, total number of questions asked, 100 percentage required to pass 75 The total number of candidates examined was 17, of whom 16 passed and 1 failed The following colleges were represented

PASSED

College		Year Grad	Per Cent
College of Medical Evangelists		(1915)	87 4
Chicago College of Med and Surg	(1914) 90	(1915)	90 4
Northwestern University		(1911)	89 5
Rush Med Coll	(1911) 91 5 (1914) 91 5 92, 94 4	(1915)	88 1
Harvard University		(1913)	87 1
University of Michigan Medical School		(1903)	91 2
Barnes Medical College		(1904)	80 7
John A Creighton Medical College		(1914)	89 2
Jefferson Medical College		(1915)	88 7
Vanderbilt University		(1912)	86 5
Western University, Ont		(1912)	86 4

FAILED

College	Year Grad	Per Cent
Homeopathic Medical College, Missouri	(1903)	53 5

Vermont February Report

Dr W Scott Nay, secretary of the Vermont State Board of Medical Registration, reports the oral and written examination held at Montpelier, Feb 8-10, 1916 The total number of subjects examined in was 12, total number of questions asked 90 percentage required to pass, 75 The total number of candidates examined was 3, all of whom passed One candidate was licensed through reciprocity The following colleges were represented

PASSED

College	Year Grad	Per Cent
Albany Medical College	(1915)	82 6
New York Homeo Med Coll and Flower Hosp	(1908)	84 8
University of Vermont	(1915)	83 3

LICENSED THROUGH RECIPROCITY

College	Year Grad	Reciprocity with
Yale University	(1897)	New Hamp

Connecticut Homeopathic March Report

Dr E C M Hall secretary of the Connecticut Homeopathic Medical Examining Board reports the written examination held at New Haven, March 14, 1916 The total number of subjects examined in was 7, total number of questions asked, 70, percentage required to pass 75 One candidate was examined and passed Two candidates were licensed through reciprocity The following colleges were represented

PASSED

College	Year Grad	Per Cent.
New York Homeo Med Coll and Flower Hosp	(1915)	90

LICENSED THROUGH RECIPROCITY

College	Year Grad	Reciprocity with
Boston University	(1909)	Mass
New York Homeo Med. Coll and Flower Hosp	(1882)	New York

Maine March Report

Dr Frank W Searle, secretary of the Maine Board of Registration in Medicine reports the practical and written examination held at Portland, March 14-15, 1916 The total number of subjects examined in was 10, total number of questions asked 100, percentage required to pass, 75 The total number of candidates examined was 7, all of whom passed The following colleges were represented

PASSED

College		Year Grad	Per Cent
Bowdoin Medical School		(1914)	86
Boston University	(1898) 81	(1914)	83
Tufts College Medical School		(1915)	82
Marions-Sims College of Medicine		(1896) *	76
Albany Medical College		(1889)	85
University of Toronto		(1914)	85

Rhode Island April Report

Dr Gardner T Swarts, secretary of the Rhode Island State Board of Health, reports the practical and written examination held at Providence, April 6-7, 1916 The total number of subjects examined in was 7, total number of questions asked 63 percentage required to pass 80 The total number of candidates examined was 5 of whom 1 passed and 4 failed The following colleges were represented

PASSED

College	Year Grad	Per Cent
Harvard University	(1914)	80 7

FAILED

College	Year Grad	Per Cent
Atlanta Medical College	(1915)	78 7
Tufts College Medical School	(1915)	75.2
Meharry Medical College	(1914)	63 8
University of Vermont	(1906)	78

Miscellany

Coffee Substitutes and Modified Coffees

The extensive use of coffee and the injurious effects attributed, in certain cases at least, to some of its constituents (caffeol, caffetannic acid and caffein), make the subject of coffee substitutes and "hygienic coffees" one of considerable importance John Phillips Street, in a recent article (Coffee Substitutes and Hygienic Coffees, *Mod Hosp*, May, 1916, p 330), gives the results of analysis of a number of such preparations None of the coffee substitutes examined contained coffee In some of the specially prepared coffees, however, wide differences were found between the claimed and the actual composition Street's standard of comparison was a sample of commercial Java coffee, which was found to contain 1 2 per cent caffein and 11 37 per cent caffetannic acid One brand (Granger's Fairy Cup Instant Soluble Coffee) from which, it is claimed, "nearly all the caffein and tannic acid is discarded," was found actually to contain 4 48 per cent caffein and 45 48 per cent of caffetannic acid—about four times as much as the amount found in the ordinary Java coffee examined! Similar percentages (4 96 per cent caffein and 48 04 per cent caffetannic acid) were found in G Washington Prepared Coffee, from which, it is claimed, "Mr Washington's refining process eliminates these harmful, indigestible substances" A slightly smaller caffein content than that of ordinary coffees was found in two brands (Hansley and Kinsella's Vacuum Coffee and Cafe des Invalides), the diminution of caffein in the latter case being due to the presence of 20 per cent chicory and other vegetable matter The claims for one brand (Richelieu Vacuum Coffee) are based on the removal of "caffeotoxins," including caffeol, which is alleged by the promoters to be the source of the deleterious effects of coffee Street is inclined to doubt the importance of caffeol In caffein and caffetannic acid content, this brand of coffee does not differ materially from the ordinary commercial Java Kaffee Hag contains 0 03 per cent caffein and 11 47 per cent caffetannic acid, which agrees with the claim that 95 per cent of the caffein is removed [Street apparently did not examine Dekafa, one of the earliest caffein-poor coffees, which was shown by the Chemical Laboratory of the American Medical Association (Dekofa, A Caffein-Poor Coffee, The Journal A M A, July 1, 1911, p 37), to contain about 0 13 per cent caffein —Ed]

Control of Tuberculosis in Victoria

In an address before the North Atlantic and New York State Conferences on Tuberculosis in November, 1915, Dr Victor G Heiser spoke of the results of efforts to control tuberculosis in Victoria, Australia, which country he had recently visited He believes that the United States has something to learn from the Australian state in regard to tuberculosis He said that the death rate for the whole of Australia is 8 per thousand This might be accounted for partly by reason of the fact that the people come to that country in the prime of life and that the birth rate is low, which would give a low death rate The figures for fifteen years, however, show that the rate has slowly but steadily declined to the figure named He was informed that every patient with tuberculosis in Victoria had been isolated The enforcement of this, as well as other laws, is strict At first in the effort to isolate tuberculosis cases, force was used, but this did not work well, and then a fee of $2 50 was paid to physicians for reporting the cases, which secured their cooperation After the cases were reported it was not difficult for the authorities to follow them up The patient in each instance was visited and given the choice of isolation in his own home, provided he rigidly carried out the regulations of the health authorities Inspections were made frequently to see that they were complied with If compliance was not satisfactory, then, without the consent of the patient, he was removed to a sanatorium where he was kept until no longer a menace to any one else Although the state is anxious to have immigrants, every one must undergo a severe physical examination before being allowed to enter the country, and in this strict attention is paid to tuberculosis In London a station is maintained for the examination of prospective immigrants before embarkation In this way the state provides against reinfection Dr Heiser says that he has recently been informed that these measures have resulted in the disappearance of the disease from Victoria

Accident Safeguards and Compensation in the Federal Service

The recent accident on a submarine in the Brooklyn Navy Yard, by which three men were killed and six seriously injured among the civilian employees, according to the *Survey*, should call attention to the inadequacy of safeguards provided by the federal government for the prevention of accidents and occupational diseases among its civilian employees It is said that it has been agreed for years by informed persons, including the administrative officials at Washington, that the federal compensation law of 1908 is inadequate Only one quarter of the government's 400,000 civilian employees are covered, and the maximum compensation allowed in case of a fatal accident is one year's wages As some of the men in the Brooklyn accident were receiving $2 a day, their widows would receive only $600 or $700 for the loss of their husbands The government makes no allowance for burial expenses or for medical treatment, and the victims of the submarine accident are being cared for in a Brooklyn hospital at the expense of the citizens of New York The federal compensation law has been condemned by the United States Bureau of Labor Statistics and by the American Federation of Labor, as well as by many organizations of civil service employees The Kern-McGillicuddy compensation bill for injured employees of the federal government, drawn by the American Association for Labor Legislation, said to be based on the best experience of American states and foreign countries, has been before Congress for three years, and although reported favorably by the judiciary committee, has not had congressional approval It would seem that the government should set a good example by leading rather than lagging behind the states in so important a measure

Fatal Mushroom Poisoning at First Presumed Arsenical

A dish of cooked mushrooms was eaten by Q—— about 6 p m, October 4 An agitated night followed, then, at 5 30 a m, diarrhea and colic and three stools in one hour, later nausea and vomiting, rigors and sensation of cold Burning sensation from throat to intestine was now complained of, then came cramps in the legs, continuous diarrhea and vomiting, with intolerance of all liquids Treatment calmed the vomiting, but the diarrhea increased to ten and even fifteen stools in the hour An attack of syncope occurred at 5 p m and another during the night The next day, October 6, the symptoms persisted and on the morning of the 7th, sixty hours after the onset, death occurred On postmortem examination there were found intense inflammation and congestion of the whole alimentary tract below the cardiac orifice The stomach contained one-third liter (about 12 ounces) of chocolate colored fluid, the intestines were empty, the liver was enlarged and somewhat yellowish, the kidneys showed congestion and punctate parenchymatous hemorrhages Poisoning by arsenic or some similar irritant being suspected, Leon Garnier analyzed the organs for arsenic and mercury The result was negative The mushrooms were not suspected because a number of other persons had eaten from the same dish The negative result of the analysis, the long incubation period (eleven hours) during which the deceased suffered from headache, etc, the fact that diarrhea preceded the vomiting and the whole course of the case point to poisoning by phallin This is one of the active principles of the amanitas, and being thermostabile it is not destroyed by cooking There can be little doubt that the deceased was unfortunate enough to eat the only fragment of amanita there was in the dish Amanitas are responsible for practically all the mushroom poisonings in France—Leon Garnier, *Ann d'hyg pub*, 1914, p 85

Medicolegal

Upholds Law Against Guaranteeing to Cure Incurable Diseases — Procedure

(Freeman vs State Board of Medical Examiners (Okla), 154 Pac R 56)

The Supreme Court of Oklahoma affirms a judgment sustaining the action of the board in ordering that the license of R. W Freeman as a physician be revoked for unprofessional conduct. The court holds valid the provision of the Oklahoma statutes which defines "unprofessional conduct" of a physician as "the obtaining of any fee on the assurance that an incurable disease can be permanently cured" In the case of *Graeb vs State Board of Medical Examiners* (55 Colo 523, 139 Pac 1099), the only case found passing directly on this point, a majority of the Supreme Court of Colorado held a similar statute to be too indefinite and uncertain to be valid The only difference in the two statutes was that the Colorado statute had the words 'manifestly incurable' instead of the word "incurable," but this is not regarded as affecting the applicability of the decision, since it is held in it that the words "manifestly" and "incurable" must be taken as applicable to the disease per se or in and of itself and not to the condition of the patient suffering with the disease at the time his treatment is undertaken by the physician However, the Supreme Court of Oklahoma thinks that the majority opinion of the Colorado court does not rightly construe the statute, and it prefers to follow the dissenting opinion in that case, as it thinks the dissenting opinion correctly interprets the statute, and that such interpretation is equally applicable to the Oklahoma statute As this court regards the Oklahoma statute, it thinks that it is not aimed at any unethical practices of physicians as interpreted by the medical fraternity, but was aimed to prevent acts on the part of physicians which are universally regarded as immoral and against good conscience, not only by the medical profession, but by laymen as well, and for which under the style of obtaining money under false pretenses the Oklahoma criminal code has provided the penalties of the law The word "incurable" in the statute is to be interpreted in its ordinary acceptation, it must be deemed that the legislature did not intend to do a useless thing, but intended the statute to be enforced in accordance with an interpretation based on the ordinary understanding of the words used, both by laymen and by physicians In that view of the case, the court is clearly of the opinion that the words "incurable disease" in the statute apply to the state of the disease which a patient may have at the time the treatment of it is undertaken by the physician, and that, if a physician undertakes to treat a patient who is suffering from a disease which has in its progress reached an incurable state according to the then general state of knowledge of the medical profession, and accepts a fee from the patient on the assurance that he can effect a permanent cure of such disease, he would be guilty of unprofessional conduct as defined by the statute In this case there was introduced in evidence the following writing "Absolute Guarantee. "———Okla, ———, 191— I, R. W Freeman, M D, party of the first part, do hereby agree to refund all moneys paid to me by H S Hawkins, party of the second part should he fail to receive a complete cure by my treatment R W Freeman" Below this Hawkins signed an agreement to follow the directions given by Freeman "through a period of time sufficient as deemed by him to effect a complete cure," or the agreement should become void It was claimed that this was not a guaranty of a cure, but the court declares it was a subterfuge which held out to the patient an assurance of a permanent cure The state board of medical examiners in a proceeding before it to revoke the license of a physician acts in an administrative, and not a judicial, capacity, and it is sufficient if the accused is informed by the complaint of the wrong charged against him and the particular instances of its perpetration charged, and has an opportunity to defend against proof of such charges and the proceedings are free from prejudice, fraud or oppression.

Admissible Evidence to Explain Roentgenograms

(Virginian Railway Co vs Bell (Va), 87 S E R 570)

The Supreme Court of Appeals of Virginia reverses a judgment obtained by plaintiff Bell, a railway mail clerk who claimed to have been struck by a sliding door to a car in which he was at work, fracturing the transverse process of the third cervical vertebra The court holds that there was error in refusing to permit a Dr Gray, an eminent Roentgen-ray specialist of large experience, to exhibit to the jury a roentgenogram taken by him showing a man's neck in normal condition The court says that the plaintiff had produced in evidence two Roentgen-ray plates of the plaintiff's neck taken by a Dr Brady, a physician of high professional standing but of limited experience as a Roentgen-ray specialist These plates would doubtless have been meaningless to the jury without explanation, but as explained and interpreted by Dr Brady they showed a fracture, and they went to the very heart of the case on the question of extent of damage If Dr Brady's interpretation of these pictures was correct they were decisive of the vital and controverted question as to whether certain bones in the plaintiff's neck were broken His attending physician did not suspect a fracture until after these pictures of his neck were taken and were said by Dr Brady to show that a fracture had been sustained Dr Gray testified that the pictures did not support Dr Brady's interpretation, and stated that he could demonstrate that fact from the pictures themselves, by showing to the jury a picture which he had taken of a man's neck in a normal condition It was claimed for the plaintiff that it was proper to exclude the latter picture because to permit a comparison of the plaintiff's neck with other necks would lead to confusion and irrelevancy It is difficult to see how this contention can be maintained The very relevancy and probative value of the roentgenograms of the plaintiff's neck depended on the correctness of a presumption that as a rule and until the contrary appears every man's neck is normal, and that the general form and structure of every human neck is the same Otherwise, Dr Brady's pictures, which were offered to show an abnormal condition, proved nothing So too as to a skeleton the plaintiff introduced to show, by way of illustration and comparison, all the bones involved when in normal condition and to give the jury an idea of their general formation and structure The court thinks it was clearly proper to admit the skeleton to show a normal neck in contrast with the abnormal one which it was claimed Dr Brady's picture showed and that on the same considerations it was improper to exclude the roentgenographic plates offered by Dr Gray which he said would enable him to demonstrate that Dr Brady's roentgenograms did not disclose any fracture The Roentgen-ray process is comparatively new, and is more or less occult, certainly to the lay mind The plaintiff was properly given a free hand in developing the proof of his injuries by means of the roentgenographic pictures and an expert explanation of them and similar freedom should have been accorded the defendant in testing before the jury the correctness of that explanation.

Employment of Physician by Superintendent

(Indiana Die Casting Development Co vs Newcomb (Ind), 111 N E R 16)

The Supreme Court of Indiana affirms a judgment for $371 in favor of plaintiff Newcomb on an alleged contract entered into between him and the defendant company by its superintendent, for the care and treatment of an employee who was injured by an explosion of molten metal and suffered injury to his eyes The Court says that some evidence was admitted relating to certain customs prevalent in the city of Indianapolis as to corporations, other than the defendant, employing physicians to treat injured employees This would be error, which would require a reversal of the judgment, did it not affirmatively appear from the record that the admission was harmless Other evidence complained of related to the manner and custom of the defendant in doing its business and was to the effect that the board of directors very seldom met, that the whole management of the corporation developed on the superintendent, who owned 40 per cent of the stock, that when any matters arose pertaining to the management of its affairs, he would consult the directors individually, and follow their advice It was contended by the defendant that without a regular meeting of the directors no authority could be given the manager to employ a physician, and without an order so made the superintendent could not bind his corporation, and that therefore the defendant was not liable for the services rendered by the plaintiff at the solicitation of the superintendent, regardless of the custom But it was proper to admit this evidence Moreover, in addition to proving the custom of the defendant in the management of its business, it was shown that in this particular instance the superintendent did consult individually a majority of the directors in relation to the employment of the plaintiff, and that no objections were interposed by any of said directors as to what had been done by the superintendent in employing the plaintiff, and after so consulting his fellow directors the superintendent again directed the plaintiff to proceed with the treatment of the case It was further shown that this had been the custom of the defendant theretofore, and that it had paid bills for services similarly contracted for by said superintendent The trial Court, in finding generally for the plaintiff found that the defendant had ratified the acts of its officers in entering into the contract, and the Supreme Court believes it was a just conclusion

Treating Case as One of Appendicitis Instead of Ptosis—Evidence

(Stout vs Bowers et al (Kan), 154 Pac R 259)

The Supreme Court of Kansas reverses a judgment entered on a verdict directed in favor of the defendants, who were sued for alleged malpractice in diagnosing the plaintiff's ailment as appendicitis, and operating on her therefor, when what ailed her was a condition of ptosis or falling of part of the intestines, which should have been tacked up and otherwise remedied The Court says that it was true, as the defendants contended, that they could not be held liable if it appeared that they possessed a reasonable degree of skill and learning in medicine and surgery, and that they used ordinary skill and care in the diagnosis, operation, and treatment of the plaintiff Much testimony of an expert character was produced as to the professional skill of the defendants, and which tended to prove that the operation was properly performed, and further, that an operation for ptosis of the bowels was not approved surgery, and was not warranted in the plaintiff's case On the other hand, if testimony was produced by the plaintiff which fairly tended to prove the essential facts stated in her petition as to the defendants' negligence, although it may have been weak and inconclusive as compared with that produced by the defendants, the ruling directing a verdict in favor of the defendants could not be upheld If the defendants' demurrer to the plaintiff's evidence could not be sustained, a verdict against her could not be directed, because of conflicting evidence subsequently produced in behalf of the defendants Her case might have been strengthened by the testimony offered in their behalf, but on their motion to direct a verdict in their favor the prima facie case made by her testimony could not be weakened or destroyed by theirs The fact that her testimony was opposed by much that was given by physicians of larger experience was no reason for taking the case from the jury And the mere fact that the physician who testified in behalf of the plaintiff was led to say, in answer to one question on cross-examination, that the defendants made a mistake of judgment, and may have acted according to their best judgment, did not destroy the testimony tending to show that the defendants failed to use reasonable and ordinary care in the case The plaintiff complained that she was not allowed to show the conditions developed by a subsequent operation and the fact that it resulted in effecting a cure While the plaintiff might have given testimony as to some of the palpable facts, she was not qualified to testify as to the skill exercised in that operation, no more than in the one performed by the defendants It was competent for her to state any manifest conditions observable by any one, but only witnesses having special skill and knowledge were competent to testify as to her ailment, or as to what was required in the way of surgery or treatment However, it would seem that one having special skill and training might give testimony as to the conditions existing at the time of the different operations on the plaintiff, the treatment required, and the effects resulting from the operations Where an expert witness testifies, and founds his opinion on standard medical authorities, it is competent for the opposing party, in cross-examining him, to read from the authorities, and to ask him if he agrees or disagrees with the opinions expressed by the authors

What Constitutes "Consulting a Physician"—"Good Health"

(New York Life Insurance Co vs Franklin (Va), 87 S E R 584)

The Supreme Court of Appeals of Virginia says that the insured in this case made application, about the middle of June, for the reinstatement of a policy which had elapsed for a nonpayment of premium due on May 2 To the question as to what physicians he had consulted since the date of the policy, he answered "None" And the question, Are you now in sound health? he answered, "Yes" It appeared, however, that on the 4th of April a physician examined him and found evidences which caused him to suspect nephritis This examination was made at the request of the man's wife, who had telephoned to the physician that her husband was not well and requested that he arrange an interview with him, which he did by telephoning to him and having him come and submit to an examination It did not appear that the physician advised the insured as to the probable consequences of the disease which he suspected The examination was only partial It was not certain that he then had the disease He declined to be treated, and left the impression on the physician that he did not think he was sick He died on July 17 of a complication of diseases, one of which was nephritis It was contended, on the one hand, and denied on the other, that what occurred between the insured and the physician amounted to "consulting a physician" within the meaning of the question and answer appearing in the application for reinstatement The Court holds that there was no error in an instruction which told the jury to find for the plaintiff, if they believed from the evidence that the company accepted the application for reinstatement and executed its receipt for payment, unless they believed that it had been proven by a preponderance of the evidence that the answers in the application were wilfully false or fraudulently made Under the rule adopted in Virginia and supported by what seems to the Court to be the better considered authorities from other jurisdictions, "consulting a physician," within the meaning of an application for life insurance, depends on the character of the interview This rule finds its foundation in the favorable construction always accorded to the insured, and the generally recognized principle that good faith and substantial truth are all that can be required of the insured in applications for insurance If, therefore, it could be regarded under the evidence as beyond fair debate that the insured understood from the physician that his symptoms were serious and indicated a malady which involved real impairment of his health or might affect his longevity, then, as a matter of law resulting from this undisputed fact, this Court could say, and the lower Court should have said, if asked to do so, that there could be no recovery But in the state of the evidence on this point the Court thinks the question was one for the jury to determine As to the import of the words, "sound health," the Court refers to what it says in Greenwood vs Royal Neighbors of America, 87 S E R, 581, decided at the same time with this case There it says that the phrase "good health," as used in its common and ordinary sense by a person speaking of his own condition, undoubtedly implies a state of health unimpaired by any serious malady of which the person himself is conscious When one says he is in *good health*, he does not mean, and nobody understands him *to mean*, that he may not have a latent disease of which *he* is wholly unconscious The mere statement by a party *that* he fully warrants himself to be in good health is not sufficient to take the expression out of its common meaning and to make it cover every disease, whether latent and unknown or not

Society Proceedings

COMING MEETINGS

Montana State Medical Association Miles City July 12 13
Washington State Medical Association Seattle, July 12 14

MISSOURI STATE MEDICAL ASSOCIATION

Fifty Ninth Annual Meeting held at Excelsior Springs May 8 10 1916

The President, Dr C R Woodson, St Joseph, in the Chair

Cardiac Dilatation

Dr. E. P Buddy, St Louis Cardiac dilatation is usually applied clinically to an enlargement of the heart cavities, giving evidence of a failing heart and of ruptured compensation However, of possibly as great if not greater importance are those cases which give no signs of decompensation, and occur usually in healthy individuals There is no demonstrable endocarditis or myocarditis The prominent symptoms are those of cardiac irritability, fatigue or possibly exhaustion The occurrence is often in the young well developed individual especially in athletes soldiers and swimmers Evidence of rupture of compensation is not present, and the cardiac findings clinically are insignificant confusing or absent. The chief and sometimes only complaints are shortness of breath on exertion, precordial pain, fatigue and palpitation Frequently the only complaint is tiredness on the least exertion Vasomotor changes blanching of the face cold hands, paleness around the mouth, giddiness and faintness sometimes occur Symptoms of neurosis —neurasthenia—are often prominent and misleading They invariably have low blood pressure and low pulse pressure

The history of these cases is of primary importance usually being one of various and multiple infections Overwork, worry, strain, overindulgence and emotion are contributing factors Temporary exhaustion of cardiac muscle either in itself or as a manifestation of general exhaustion is probably the real basis Irritable heart often means a fatigued heart which may become exhausted Hyperthyroidism intestinal toxemia, tobacco and beer are factors in producing this irritability The drop heart or the asthenic heart associated with visceroptosis is an example of atonic musculature in which symptoms of transient dilatation appear Functional tests for efficiency are more important than percussion and auscultation of the heart The treatment resolves itself into rest treatment of the underlying condition, infection or toxemia and strengthening the heart muscle increasing its tone by judicious graduated exercises together with means of improving general body well-being

Diagnostic Value of Respiration Tracings

Dr. George Richter, St. Louis Inspiratory and expiratory dyspnea and asthma are caused either by mechanical interferences or by chemical changes in the blood They may be due also to a pathologic condition of the nervous system, as the Biot and the Cheyne-Stokes type of respiration It is an old teaching that in certain cases respirations are unequal in that the two sides will not always move exactly simultaneously The diseased side occasionally appears to lag behind the other while exhibiting a lesser expansion To study and analyze such a phenomenon receivers were applied on both sides of the thorax in a large number of cases to obtain a simultaneous tracing on the same strip of paper It was found that the lagging behind is very rare, where it had been quite apparent on inspection The illusion is due to the psychophysical law of relation between intensity of stimulus and apperception the greater stimulus seems to occur earlier, it is only perceived earlier It is the same with the radial pulses in certain cases of aneurysm Another phenomenon was observed frequently but not so readily recognized by inspection namely that over certain diseased lungs quite frequently in tuberculosis and not in acute inflammatory diseases, an inspiratory retraction of an interspace (not of all interspaces) occurs, frequently limited to a small area of such an intercostal space while over all the other parts a distinct bulging is recorded Thus one obtains opposite waves during the same respiratory phase, also waves of a curious, regular irregularity in shape on the diseased spot This may serve a diagnostic purpose As it is seen occasionally at a very early stage of infection, the cause may lie in an increased tone of the intercostal muscles, a tetanic state analogous to the muscular defense over an appendicitis The respiratory muscular contractions have ceased locally, and the diaphragm now pulls the space inwardly In some cases this respiratory stop is overcome by a more active breathing or it may become exaggerated It is probably due to vagus irritation which on moderate stimulation (also of the laryngeus superior) inhibits inspiration and leads to expiratory standstill (the paralytic thorax in phthisis) while a stronger stimulation causes an inspiratory standstill (asthma) The tetanus means a fixation of both external (inspiratory) and internal (expiratory) intercostal muscles and sets the lung at rest, as in artificial pneumothorax Incidentally the tracings over a normal intercostal space show a very fine, physiologic tremor and a greatly exaggerated tremor over a pathologic area—also of some diagnostic value When the patient coughs we observe many rapid ups and downs in the curve, air being expelled with rapid intermissions—vibrations of the vocal chords

Discussion on Papers of Drs Buddy and Richter

Dr O H Brown, St Louis The muscle rigidity in localized areas mentioned by Dr Richter may be likened to the Pottenger sign and be of practical value by the simple use of the finger tips There are many cases of cardiac incompetency of the types mentioned without marked signs If recognized early much can be done for them

Dr N P Wood, Independence I have obtained good results from venesection in cases of dilatation By taking away a pint or two of blood we reduce very considerably the amount of work required of the heart, which gives us an opportunity to get the benefit of therapeutic measures

"Stomach Troubles" — Their Significance

Dr Francis Reder, St Louis A lesion of any abdominal organ can, by reflex act, cause vomiting In highly sensitive persons, mild peritoneal irritation may cause violent vomiting, in the phlegmatic, severe irritation may cause only mild vomiting The definite nature of the lesion is not always indicated by the character of the vomiting However, the vomiting of food little or not changed, from eight to ten hours after ingestion, usually points to gastric dilatation, persistent vomiting without bile points to pyloric stenosis Cancer of the cardiac extremity gives food little changed, cancer of the pylorus, or duodenal ulceration, food more digested Bloody vomitus suggests ulcer of the stomach or the duodenum or hepatic cirrhosis, profuse, watery vomitus indicates ulcer or cancer of the stomach or pylorus Gallbladder disease occasions vomiting of bile mixed with food A grass-green vomitus is found in general peritonitis Incessant violent vomiting occurs in pancreatic disease, stercoraceous vomit in intestinal trouble of an obstructive nature These cases are usually chronic, and seldom exhibit well marked symptoms other than epigastric pain and vomiting Appendicitis especially chronic, is the foremost causative lesion characterized by a feeling of emptiness not relieved by eating which excites vomiting Gallbladder trouble is often accompanied by irregular paroxysms of vomiting continuous and persistent in the severer type, projectile vomiting usually follows a duodenal perforation Vomiting is an early and constant symptom of acute obstruction, frequent gastric uneasiness with vomiting on slight exertion, of chronic intestinal obstruction Upper bowel obstruction is indicated by profuse continuous vomiting lower bowel lesion by milder attacks Aneurysm of the abdominal aorta and ptosic kidney are other causes The proportion of stomach lesions in cases showing stomach symptoms is believed to be about 1 10

DISCUSSION

Dr. Herman E Pearse, Kansas City It is extremely rare to find an inflammation occurring from irritation along the alimentary tract reflected on the stomach unless the irritation occurs in some organ between the fundus of the stomach and the middle of the transverse colon In some cases of ulceration of the descending colon and obstruction of the rectum, as well as in many ovarian and tubal inflammations, the patient vomits, but in every one of those cases it will be found that peritoneal inflammation has reached over and involved the peritoneal covering of the area mentioned The reason of this is not hard to find It is developmental If the patient vomits from reflected irritation it will usually be found that it is from streptococcic infection on the right side, or along that portion of the intestinal canal If it occurs from a pus infection of the tubes or ovaries, or from the lower bowel, it will be found to have spread to the peritoneal covering of the second portion of the intestine

Atony, a Basic Factor in Most Gastro-Intestinal Pathology

Dr John M Bell, St Joseph Of the two factors which underlie all functions of the alimentary canal—secretion and motion—the latter is most frequently deficient It exists as a result of the enervating life of the day When food leaves the mouth it should be under muscular control until eliminated Gravity plays no part in the onward movement of foodstuffs Atony, the inability of a viscus to pass its contents onward after the chemical function has been performed, is the important factor Food decomposition may take place if delay is a factor Absorption of these products affects the portal circulation so that ulcers or denuded surfaces do not heal but more readily undergo malignant degeneration Absorption from a baggy colon is the most potent factor in cholecystitis, from the duodenum, infection of gallducts and pancreatic ducts The bacteria of a baggy cecum are the most frequent factor in appendicitis Retention in the sigmoid means ultimately a denuding of the mucous membrane, which, with a polluted portal circulation, favors malignancy at this point. Treatment seeks to restore tone to the skeletal as well as abdominal muscles, an antitoxic diet, abdominal massage, life in the open air, exercise a part of the daily life, not merely an occasional effort Medicine merely bridges over conditions until a hygienic life restores to normal

DISCUSSION

Dr Olney A Ambrose, St Louis Two conditions cause apparent retention in the stomach, one is functional atony, the other is organic obstruction The fluoroscope quickly differentiates those conditions They are not so easy to differentiate clinically, but this is one very important point that can be depended on The individual with atony is apparently acutely ill and not chronically ill, while the individual with obstruction producing retention is chronically ill

Public Service Obligations of Physicians How May They Best Be Met?

Dr. W S Allee, Olean The state has given us some incidental protection by laws to govern the practice of medicine and surgery which were, of course, primarily intended to protect the public from impostors and incompetents It is our duty to see that these good laws are not repealed or amended so as to render them useless for the purposes intended Our medical schools have assumed a high rank and compare favorably with the best in our country, we should see that no backward step is taken and that our best schools shall not be hampered by opposition from sources influenced solely by selfish greed We should form a closer alliance with the teachers of our state by helping to get their services proper recognition and better paid We should take a more active interest in politics than we have done in the past I should be glad to see every doctor become an active politician, using the word in its better sense We should cultivate a closer relation with the public press, hoping to have fair treatment in the discussion of questions pertaining to medicine We might influence the press favorably through information supplied by publicity committees from the several county societies We should help to get good officials in city, town and village governments At the primaries we can do our best work, get good men to accept the tender of a nomination and then use our utmost power to nominate and elect them Our cause being just, we have but to place it before the public in a proper light and success is assured

DISCUSSION

Dr Herman E Pearse, Kansas City In the last fifteen years, since the beginning of the fight of the medical profession in Missouri for better things commenced, no one has taken a more successful part than Senator W S Allee, he has stood like a stone wall for the things that are right The next strong force that has helped us so greatly in acquiring what we want has been the services of The Journal of the American Medical Association When it began the campaign of publicity, the campaign against wrong, the campaign for public health, the campaign against nostrums and quackery, the Association was assailed from every quarter The American Medical Association has been sued, threatened, and injured in every way possible, but never for a moment has it turned from the support given us Whenever we tried to do what was better for the medical profession in our own communities, whenever we tried to support professional ethics and render public service, we have always found The Journal standing by us, ready to advise and to help

Dr C H Brown, Fair Play I want to indorse particularly one part of Dr Allee's paper, in which he referred to the establishment of a better understanding with the press There should be a better cooperation of the medical profession with the press for the simple reason that through it we can reach the people and educate them in a way that we are not now

Transplantation of Bone

Dr Ernest F Robinson, Kansas City My experience in supplying bone defects consists in resection of the ulna, radius and inferior maxilla, and in the transplantation of bone in the treatment of ununited fractures In most of these cases I have used the so-called medullary splint or "dowel peg," usually taken from the tibial crest The periosteum has been left adherent to the transplant Albee's "bone-inlay" I have found admirable for certain cases, and especially adaptable in the immobilization of the spine in tuberculosis of the vertebra Reconstructive surgery is the highest aim of surgical art Transplantation of bone is one of the great steps of this modern surgical progress, with infinite possibilities for good

DISCUSSION

Dr W S Sutton, Kansas City Bone transplantation properly done is the nearest to a "sure thing" that surgery presents The fact that bone grafts live is no better presented in any case than in badly comminuted fractures The treatment of these fractures bears out fully the contention of Macewen that the implantation of small fragments of bone will in itself produce a large growth of bone Why, then, do we use the large bone transplant? It is because we want something which will help to hold the bones in place That means a long transplant

Dr J J Link, St Louis Bone grafting is a simple operation when done by a skilled operator and if done under favorable circumstances, under absolute asepsis

Dr Gordon Beedle, Kansas City Operative work on bone fractures has been an evolution The first object has been to get away from the metallic appliance, the second, to simplify the surgical procedure, third, to limit surgical procedure to the operative field if possible, and last of all, of course to get ideal results Splinting of bone will give ideal results in some cases, even the Lane splint, inlay splint, or the medullary splint Albee takes the graft from the proximal fragment and, bringing it down in slat form, bridges over the fracture This is superior to the medullary transplant in that the field of operation is confined to one bone

Dr C B Francisco, Kansas City You can get a better fit with the inlay splint, and in order to get 100 per cent cures you have to have a good fit That is illustrated best, perhaps, in cases of congenital fracture of the tibia

Dr. Charles Geiger, St Joseph It is only a matter of time until the nail or the wire or the plate will become infected and will have to be removed A bone peg is not a foreign body The bone will become absorbed or will unite with the surrounding bone and never cause trouble

Dr. Robert M Funkhouser, St Louis There is a place for the Lane plates I have used them in cases in which nothing else would answer the purpose Especially is that true in cases of fractures in connection with joints

Sporadic Meningitis in Children

Dr. Phelps G Hurford, St Louis In five years I have seen forty-seven cases of meningitis in which the infecting organism was found Twelve of these were cases of the epidemic form and are not considered as sporadic cases Of the remaining thirty-five cases, twenty-two were due to the tubercle bacillus, seven to the meningococcus of Weichselbaum and two each to the streptococcus, staphylococcus and pneumococcus An interesting feature of the cases due to other cause than the tubercle bacillus is that they occurred in children under 2 years of age in all but four instances, and the tuberculous cases were in infants under 2 years of age in only ten instances One case due to the staphylococcus was in an infant 12 days old The only symptoms were frequent convulsions and irregular, low fever There was no rigidity, no Kernig sign, no constancy about any of the reflexes The baby developed a rapidly progressing hydrocephalus and died in about two weeks No focus of infection could be demonstrated Lumbar puncture done on the second day of observation showed a purulent fluid with pure staphylococcus culture Of the nine infants with purulent meningitis, five showed definite hydrocephalus, two of them after the meningeal symptoms had entirely subsided All the infants died The four older children recovered There were three cases of chronic posterior basal meningitis that were assumed to be due to the meningococcus, all terminated fatally, but as the organism was not found and no necropsy was obtained, they are not included The most valuable lesson learned was the advisability of treating every case of purulent meningitis with Flexner's serum at once, unless the first examination shows another organism than the meningococcus The serum should be given frequently, until fever and rigidity have disappeared. Spinal puncture is the only positive means of diagnosis It should be performed in every case with meningeal symptoms and the fluid examined chemically, microscopically and by culture Meningeal symptoms may be present in almost any acute infectious disease The intoxication of infants is likely to resemble meningitis

Ankylostoma Duodenale

Dr. A H Thornburgh, West Plains A man, aged 52 a well driller who had worked during the past four or five years in an infected district in the South, had been in failing health for two years past. He had alternating attacks of diarrhea and constipation I demonstrated the ova of hookworm in the intestine, and the state bacteriologist confirmed my findings I gave him the thymol treatment which was followed by a severe exacerbation of the bowel condition with mental derangement severe diarrhea, and progressive and rapid weakness, which terminated in death in about four weeks

Systemic Blastomycosis and Coccidioidal Granuloma

Dr Samuel T Lipsitz, St Louis My case was that of a negro man who lived about fifty-one days after the onset of his disease, the shortest course recorded He developed signs of bronchopneumonia and numerous subcutaneous and intramuscular nodules appeared over various parts of his body These suppurated and showed double-contoured, endosporulating organisms These were also found in sections taken from the surrounding tissue and in the sputum Characteristic cultures were grown The disease was reproduced in a guinea-pig, the same bodies were again found and the organism again grown in pure culture This is the first and only case of coccidioidal granuloma reported in Missouri

Vaccination in Smallpox

Dr. F M Vessells, Perryville There is a growing sentiment among country physicians that our modern so called smallpox is not smallpox but another and very much milder disease, that it is not necessary to vaccinate, that vaccination is more severe in its manifestations than the disease. Some physicians tell their patients not to be vaccinated This is wrong, as can be shown by clinical reports and statistics

Need of a Real County Health Officer for Rural Districts

Dr J Q Cope Lexington The sanitation of the rural districts is bad It has never had any supervision and little advice from medical authority Contagious diseases are seldom quarantined properly Rural schools, mining camps, unincorporated villages and suburbs of cities are often in a deplorably insanitary condition, and there is no one in authority to correct this state of affairs or give relief The water supply, the disposal of dead animals, precautions against the fly and mosquitoes, the proper construction of closets and dangers of the ordinary kind are subjects for intelligent regulation, and a general system of education should be carried on in regard to all such matters Under the present laws of Missouri the so-called county health officer has no authority in this broad and important field About the only thing he can do is to quarantine contagious diseases and that is seldom done because there is no law requiring that such diseases be reported The county health board is composed of a physician and the three county judges The judges are generally farmers and have not studied sanitation or preventive medicine, and therefore do not realize the importance of this work They think what was good enough for their fathers is good enough for the people now Consequently they oppose the health officer in everything that is not absolutely necessary, and refuse to pay the bills for anything that the physician may do on his own initiative A new law is needed prescribing the general duties of the county health officer, placing him on a fixed salary, and requiring him to give his entire time to the work, thus making him independent of the county court or any one else

The law should require that all contagious diseases should be reported to him that they be quarantined, and that all cases of tuberculosis be regulated It should give the county officer authority to abate all conditions that are dangerous to the public health He should be an advisory officer in all things pertaining to public sanitation and the prevention of disease and it should be part of his duty to institute an educational campaign along these lines Very few small villages have any board of health or health ordinances through which contagious diseases or other dangerous conditions can be controlled Advice from the county health officer in such times would be a great benefit Advice coming from an officer especially fitted for such work and with the authority of his office behind him would do much more good than if the advice was given by an ordinary physician Such an officer would be a great help in driving out quackery and ignorant and dangerous opinions held by the common people It would be a long stride in freeing the people from ignorance and superstition, without which quackery could not exist.

Rural Sanitation

Dr. J C Boone, Charleston The difficulty of getting practical sanitary measures operative in rural districts is the lack of understanding of the many articles published on the subject, customs and habits of thought, indifference due to interest in other matters, and because a great many do not get the literature to read The personal lectures from time to time given by the family physician are but half carried out, though effective in creating a desire for something to be done Present laws are defective Sanitary work is haphazard Three methods to overcome this may be suggested

1 The department of preventive medicine of the state university to send out lecturers to cooperate with the agricultural board at county fairs, agricultural meetings and by special arrangements when possible where exhibits are made and inspection of premises with instructions given This would create a desire for more thorough work.

2 One or more counties to organize into sanitary districts with full time health officers paid by the districts All sanitary affairs of county and towns and villages to be under the care of such officers This would help but it is slow and expensive to the organizer Unless adjoining counties also organize, its effectiveness is hampered

3 The state to be organized into full time health officer districts and the cost to be paid for out of the state funds

This would systematize the work, conserve energy and be more economical Cooperation with an international health commission would be advisable District laboratories could be established to give quicker replies to the country doctor's specimens for aid in diagnosis These laboratories to work under the state laboratory or the state university

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MEDICAL SOCIETY OF THE STATE OF NEW YORK

One Hundred and Tenth Annual Meeting, held at Saratoga Springs, May 16 18, 1916

(Concluded from page 2037)

Technic of Abdominal Cesarean Section

Dr William M Brown, Rochester Patients who suffer from most shock, distention and pain are the ones who have had most traumatism and handling in the peritoneal cavity To avoid the slipping down of the uterus in the pelvis before the incisions are closed, I devised a method of temporary suturing of the uterus to the abdominal wall which prevents emptying of the uterine contents, and protects the viscera from handling Bleeding is more easily controlled than in pelvic delivery Later a procedure was introduced which simplified the method still more This was the use of from four to six of the ordinary power clamps of Moynihan or Backhaus The uterus was clamped firmly to the abdominal wall, instead of sutures being used Among fifteen cases treated in this way, there have been no deaths, and recovery has been remarkably smooth and free from vomiting and distention

DISCUSSION

Dr J Wesley Bovée, Washington, D C I should like to know the method of treatment of the abdominal wound and the uterine wound in operating in cases of suspected infection

Dr Sylvester J McNamara, Brooklyn By what method does Dr Brown apply the forceps? How much abdominal wall is included in the grasp of the forceps? Has Dr Brown any experience with tearing of the uterine wall by such forceps?

Dr A B Miller, Syracuse Does Dr Brown select the cases in which he suspects infection, or does he apply this method in his general cases? Generally, I feel that the uterine contents will not give rise to infection in the peritoneal cavity, although they may give rise to endometrial trouble The method of Davis, of upper abdominal operation, prevents adhesions from taking place One may do cesarean section many times and not have any infection I feel that nothing is gained by fastening the uterus to the abdominal wall

Dr William Bryan, West New Brighton I have had better results since I have been doing the Davis operation with high incision, and I have paid very little attention to the contents of the uterus and whether they escaped or not I have had no occasion to regret it I have not clamped the abdominal wall to the uterine wall I have attempted to suture the uterine wall to get a mechanical grip, but it takes extra time and traumatism If one succeeds, one has not accomplished much The uterine contents do not do much harm Careful technic, rapid operation and a simple procedure, with less delay and less traumatism, give the best results

Dr William M Brown, Rochester About the treatment of the incision and suspected infection, I have practically made no difference, that is, unless I am certain that there is no infection I have had one case of infected uterus in a hysterectomy I did not know the patient had a rise of temperature I was impressed with the fact that while the woman had a severe sepsis, chills lasting twenty-five minutes and a temperature of 106 F, there was no infection of the peritoneum whatever It was a pure septicemia She recovered perfectly In regard to tearing of the uterine wall, I have had nothing of that kind We used Guy sutures, and they tore out because they did not go into the abdominal wall deeply enough The clamps do not go into the endometrium at all The abdominal incision is made and then the uterine, and the assistant picks up a comfortable portion of the uterine muscle and the whole abdominal wall half an inch from the edge of the incision and clamps it I then finish my cut through the uterus The main question is not so much one of infection as it is of handling the intestine, after the uterus is emptied it contracts, and the intestines will override unless you take a towel to pad them off I then close the uterine incision

The Influence of Syphilitic Invasion in Gynecology and Obstetrics

Dr J Wesley Bovée, Washington, D C Syphilis is about eight times as frequent as admissions state There is an alarming prevalence of syphilis among those who deny having it, or who present no symptoms of it Morrow and Neisser state that 5 per cent of the German population and 2 per cent of the population of the United States have been infected In 619 cases collected by me from gynecologic and obstetric clinics, there was a probable total of 38 per cent infections, about 60 per cent of these were white women Syphilitic infection in females is much more obscure and easily overlooked or mistaken for other conditions than in the male Cervical chancre closely resembles erosions and infiltrations Local manifestations of syphilitic invasion of the female genital tracts are slight, disappear without leaving a trace, and hence commonly escape detection Tertiary lesions of the cervix, however, are sometimes seen Possibly spermatozoa carry spirochetes into the ovaries and tubes, but thus far this is unproved Considering the relationship of syphilis, as regards obstetrics, we can discuss the probable routes of infection from mother to child I feel that there is no such thing as a healthy mother with a syphilitic child, and vice versa Infection is latent in one or the other Once a diagnosis of syphilis is established, treatment should be as vigorous as is compatible with safety It would seem beneficial, perhaps, to regard all patients as at least mildly syphilitic and to apply antisyphilitic treatment

DISCUSSION

Dr Thomas J Watkins, Chicago I believe that the frequency of lesions on the cervix is greater than stated This emphasizes the risk of examining patients without gloves, and also the importance of sterilization of instruments between the examination of one patient and another It is not too much to say that all obstetric and gynecologic cases should have the Wassermann test A man who had made examinations of 4,000 cases found that of those who had a positive Wassermann, 50 per cent were women in whom syphilis was not suspected

Dr George Gray Ward, New York The matter is of interest in regard to the question of Colles' law Recently Dr J Whitridge Williams reported a case which seemed to prove that this law might hold good He had a case in his service of a negro woman who had had eleven labors under his control She had had repeated Wassermanns, but all were negative The first five labors were perfectly normal, the sixth was a twin birth, and one child was markedly syphilitic, the other was not This was probably a case of superfecundation Subsequent labors under observation gave no evidence of syphilis The woman never showed syphilis If the woman had two lovers at the time of conception, it would be the strongest evidence that there was reason to believe in the validity of Colles' law

Vaginal Subtotal Hysterectomy for Procidentia and Cystorectocele Associated with Fibroid Growths or Fibrosis Uteri

Dr Hiram N Vineberg, New York This method possesses advantages over total hysterectomy because it supports the bladder and it is attended by less hemorrhage The technic is as follows Longitudinal incision of the anterior vaginal wall, extending from near the urethral meatus within an inch or an inch and a half of the cervical os Separation by sharp or blunt dissection of the vaginal walls from the underlying bladder Pushing of the bladder up from the uterus and base of the broad ligament by gauze dissection Transverse incision of the vesico-uterine peritoneal fold Delivery of the body of the uterus through the vaginal incision If the ovaries are to be preserved a ligature is passed around the ovarian ligaments and the tissues cut between the ligature and the uterus If they are to be removed, the ligature is passed around the infundibulopelvic ligament A ligature is passed at the level of the os internum, the body of the uterus is amputated at the desired level by a wedge-shaped incision the thin edges of the wedge toward the cervix the edges of the wound then brought down by continuous catgut suture and the raw area of the cervix sutured laterally in the same way The cervical stump is then sutured to the subpubic fascia and anterior vaginal wall Further modifications of this operation would be the shortening of the uterosacral ligaments to prevent the cervical stump from pushing downward Of thirty-two cases treated in this manner twenty-five have given excellent results One was a failure

Technic of Vaginal Plastic Operations for Cystorectocele and Prolapse of the Uterus

Dr R T Frank, New York The operation for cystocele is as follows The anterior lip of the cervix is seized with volsella and pulled to the vulva the mucosa is seized with artery forceps half an inch below the mucosa, the mucosa is incised between the two fixed points and resected on both sides half an inch along the line of incisions superficially, neither deep nor wide reflection is permissible, narrow flaps on each side are seized with two forceps by an assistant at the lowest angle of the wound the bladder is freed from the cervix in the median line by the snips of scissors, the bladder is freed by pushing firmly up against the cervix until the lateral fibers become plainly demarcated After exposure of these bladder pillars the vaginal flaps are to be separated more widely, a thin line of fascia continuous with the pillars is to be preserved. The repair is to be done as follows Two transverse sutures of medium chromic catgut are passed taking in first one pillar then the cervix then the opposite pillar, the upper suture is passed at the lower border of the peritoneal reflection the next half an inch below it, the pillars are united firmly in the median line by tying thus raising the bladder to a higher level and making it flat instead of bulging

For rectocele the repair is as follows After exposure, the rectum should be pushed away from lateral structures with the finger The approximation should take place at the descending rami of the pubis The rectum should be held aside and the mass of tissue grasped and a heavy chromic catgut suture should be passed taking in the lateral fascia and underlying muscle on one side then forming a partial purse string suture grasping the rectal fascia between the rectum and mucosa around the upper part of the rectocele, and again grasping the lateral structures on the opposite side the suture being tied The rectum is thus firmly held fixed and back. The gap in the mucosa should then be sutured with interrupted sutures, as this region later becomes less accessible

Usefulness and Definite Limitations of the Pessary Treatment of Retroversion and Prolapse

Dr. Robert L Dickinson Brooklyn In the group that can be taken care of by pessaries there should be included first, the retroversions of early pregnancy, second, postpartum retroversions, third, bad risks, and fourth a few cases in which retroversion has affected the bladder In regard to the first group of cases the physician should examine the patient early, between the first and second omitted period, and give written directions as to treatment, as in this way serious retroversion can be prevented. In the postpartum group examinations should be made at two weeks, six weeks and three months postpartum If patients are well taken care of then operation later can be avoided Third, the bad risks, the women with diabetes *tuberculosis* or with sclerosed arteries in whom resistance is poor are poor subjects for operation. These naturally fall into the pessary class and the pessary relieves constipation and improves general health To the operative class belongs the cystocele and rectocele group I am more inclined than formerly to operate on elderly women Working women, as a rule should be operated on They have no time to keep coming to the physician to be examined In the case of young girls it is better to do an operation rather than give them the office habit There is distinct use for a pessary for a few months after operation until the organs have had time to recover tone The kind of pessary which the patient wears with comfort and can handle herself with is the one most likely to suit that particular case The patient should be instructed how to remove and cleanse it, that scrupulous cleanliness is important, and that she needs regular douching If this is attended to, ulceration need never occur The pessary can be taken out at night and put in again in the morning

DISCUSSION ON THE PAPERS OF DRS VINEBERG, FRANK AND DICKINSON

Dr J Riddle Goffe, New York The pessary has a definite place in the treatment of these conditions, but speaking broadly it is only a temporary device, to be discarded and supplanted by operative procedure when the time and place serve Age is rarely a contraindication for surgical procedure in a woman who is able to be on her feet Dr Vineberg's operation seems to come into direct competition with supravaginal hysterectomy There is no question about the superiority of the latter In the completion of the operation the normal relation of parts is restored and the physiologic function of the ligaments and the bladder maintained

Dr Thomas J Watkins, Chicago The pessary has a very important field, even if a limited one Its use can only be decided by one who has done much work on the mechanics of the pelvis As regards prolapse operations, conditions get worse especially after the menopause, so that rectocele and cystocele conditions must usually be corrected before they become extensive, hence operative procedures in this class of cases give better results There is no one operation that is best for prolapse of the uterus or of the bladder Operative procedure should be modified to suit the case I myself favor a modified transposition operation rather than hysterectomy

Dr H S Crossen, St Louis The ball pessaries, the Smith pessary and other forms slip out I have used the double horseshoe pessary to good advantage No one can learn to use these pessaries by descriptions but simply by personal practice The horseshoe pessary can be left in place for a long time if the patient comes for observation at regular intervals

Dr J Wesley Bovée, Washington, D C The farther we get away from any one particular operation, or from any one form of treatment the safer we are Those who are addicted to one form of operation will find they will have to use pessaries later as reputation savers The best time to use a pessary is before operation A large proportion of patients can then be helped If the pessary is the right one it will not cause inconvenience If it causes pain it is not *the right one* The soft pessary is to be condemned, the hard rubber pessary is the best in use at present The Hodge modification of the Smith pessary is the best type

Dr Richard R. Smith Grand Rapids Mich I endorse most heartily what Dr Dickinson said In young girls and young married women before childbearing, there is nearly always a neurotic element, and the less attention is called to the pelvis the better In older women operation alone should be used in certain complicated cases But it would be well to bear in mind one thing In women during the childbearing age there should be no operation done which would interfere with this important function *After this period is* over other operations can be considered I have had the best results from Dr Watkins operation.

Dr Leroy Broun, New York I cannot recommend Dr *Vineberg's operation in complete* procidentia The operation that will give the best results is complete hysterectomy, sewing together the broad ligaments and putting the bladder on top of them

Dr. Samuel W Bandler, New York On the first sign of retroversion, the Smith-Hodge pessary should be introduced When involution takes place, there is no longer retroversion but retroflexion If the patient complains of pelvic pain, and retroversion is found, the patient can be directed to wear a pessary provided there are no complications, such as shortened ligaments If the same patient comes back later and says that all her symptoms have disappeared, she may be given the choice of wearing a pessary for the next twenty-five years or of having an operation and dispensing with the use of the pessary

Gynecologic Surgery in Hysteroneurasthenic Patients

Dr H S Crossen, St Louis When the pelvic condition is seriously depressing the general health through blood loss, or pain due to lesions, the lesion must be removed, irrespective of the coexisting nervous disease In markedly neurasthenic patients, where pain is of secondary importance, operation is contraindicated, but if prolonged treatment with all ordinary measures fails to relieve pain, then operation is indicated When operation is necessary sooner or later, it had better be done before neurologic treatment Rest in the hospital may give a good start to the recovery of the patient, but if the influence of the lesion is questionable, the neurologic treatment should come first, as with treatment, operation may be rendered unnecessary

DISCUSSION

Dr Leroy Broun, New York What treatment should be given to these neurotics? If there are no local findings, the cases are undoubtedly for the nerve specialist, but if there are distinct local findings from the point of view of the gynecologist, he must attend to them, but patients must also be treated neurologically Whatever affects the general health of these patients affects their nervous and mental status, and the gynecologic surgeon must remove whatever lesion may have a bearing on this In my own experience, in operating on 500 insane patients, thirty-two were so much improved in general health that they were discharged from the hospital as temporarily cured

Dr Gordon Gibson, Brooklyn The question to be asked is, "Is the patient neurasthenic?" Is it a mild pelvic lesion influencing an exhausted nervous system, or are the symptoms entirely due to the pathologic condition? The history of the neuropathic or psychopathic patient often discloses a slight pelvic lesion

Dr Samuel W Bandler, New York I believe there are no cases of pelvic disease unless associated with some form of ductless gland disturbance Pain is often reflex in these cases The condition of the patient is affected through the medium of the ductless glands, of which the ovaries and the thyroid are the most important The nervousness is produced by the metabolic change For that reason, the nervous patient is often better for an operation if one does not promise too much

Dr Richard R Smith, Grand Rapids, Mich The first important point is the necesity of a thorough study of the physiology of the pelvis, and the second is the relation of the pelvic reflexes to the neuroses The gynecologist should act in consultation with the neurologist rather than the reverse

Practical Aspects of the Internal Ovarian Secretion

Dr William P Graves, Boston In genital atrophy there may occur abnormalities of great importance to the gynecologist Circulatory disturbance of the external genitals, such as kraurosis and furunculosis of the vulva, may be greatly relieved or cured by the administration of ovarian extract Ablation symptoms, in the great majority of cases, are markedly relieved by administration of ovarian extract After hysterectomy, vasomotor symptoms follow the transplantation of ovarian tissue and also of leaving the whole ovary in situ, similar in degree and frequency to those following total ablation of the ovaries Functional amenorrhea in the young is often relieved by the administration of ovarian extract Extracts of the whole ovary are more efficacious than extracts of the corpus luteum

DISCUSSION

Dr. Samuel W Bandler, New York I agree with Dr Graves that the extract of the whole ovarian tissue is more efficacious than that of corpus luteum alone I do not use corpus luteum extract. In reference to operations done in the later years of a woman's life, such as hysterectomy for fibrosis uteri, I do a vaginal hysterectomy, and if the ovaries look normal, I leave them behind I do not think it is wise to leave an inflamed ovary, for that would invariably necessitate a second operation If, after the operation, the patient is put on ovarian extract, it will prevent the occurrence of flushes If my surgical judgment so dictates, I am never afraid to remove both ovaries, and the treatment with ovarian extract is begun at once

Dr R T Frank, New York I must protest against this statement of Dr Graves that in ordinary hysterectomy it is unimportant whether the ovaries are removed In my experience, if the ovaries are left behind, there is much less likelihood of these troubles occurring Unless an ovary and tube in a healthy condition are left it will do no good to leave them, and if the woman is close to the menopause, it is certainly important to leave an ovary with good circulation

Resection of the Pars Interstitialis in Diseases of the Fallopian Tubes, with the View of Preserving the Uterus

Dr L K P Farrar, New York Many uteri recover after resection of the tubes The operation consists of the following steps Preliminary curetting and disinfection of the uterine cavity Laparotomy incision, inspection of ovaries, oophorectomy only to be done where imperative Ligation of the ascending branch of the uterine artery Excision of tube down to the uterine mucosa Closure of the wound with interrupted sutures

Pelvic Infection

Dr John O Polak, Brooklyn A study of results of conservation of ovaries with resection or suspension has caused us to swing toward more radical treatment, because it has been found that it is useless to conserve ovulation without menstruation, and that a conserved ovary behaves badly in cases of pelvic infection It tends toward cystic formation and pain, and the trauma and circulatory disturbance disturb the functional activity Another important point is that no operation should be undertaken during the acute stage of infection, or when exudate is present Bacteriology of the infection is important as different organisms have different histories Gonococcus and streptococcus infections differ widely, the former causing suppurative salpingitis, oophoritis and peritonitis, the latter lodge almost always in the parametrium

Infection of the Uterine Appendages

Dr E E Montgomery, Philadelphia Infection of the appendages is favored by any condition that favors congestion of the pelvic structures These conditions lower resistance of the tissues and promote nurture of the infecting elements The infection spreads by the mucous surface, and is accentuated by the disturbing influence of menstruation The most usual organisms are the gonococcus, staphylococcus, streptococcus, colon bacillus, tubercle bacillus, pneumococcus and influenza bacillus The gonococcus is most superficial in its effect, but prepares the ground for other organisms and is thus more baleful in its work Nature endeavors to protect herself by closing up the tubal ends against the invader Sometimes the infection is so virulent as to prevent this, sometimes so slight that it does not take place The peritoneum is sometimes directly infected through the wall, causing an extensive abscess involving the tube and ovary Such effects necessitate the sacrifice of the organs

DISCUSSION

Dr F F Simpson, Pittsburgh I would emphasize the extreme wisdom of avoiding operation until all inflammatory exudate has been absorbed completely, as its presence is Nature's positive statement that there are virulent organisms present which she fears to admit into the circulation, and if Nature fears to admit these, the surgeon should be afraid to spread them on the peritoneal surface

Dr. Thomas J Watkins, Chicago I believe that for years we have been making mistakes and calling more of these cases gonorrheal infection than was necessary Varieties of streptococcus infection that have been present in throats and mouths have given increase of infections in the peritoneum I have had two cases of salpingitis secondary to throat infection The knowledge that has been gained in the treatment of tuberculosis should be utilized in the treatment of acute pelvic infection Outdoor treatment is as important for the one as for the other

Dr. Hiram N Vineberg, New York When the uterus and tubes have to be removed, the question is whether or not to leave a portion of the ovary My experience agrees with that of Dr Polak that the patient is very much worse off if we leave a portion of the ovary It is liable to undergo cystic degeneration If, when doing an operation for fibroid uterus, I can leave enough uterine tissue behind and enough ovary so that the woman can go on menstruating, it will do good but if the uterus has to be removed entirely, it is a question whether what we can retain of the ovary will prevent menopause symptoms

Dr H S Crossen, St Louis Preservation of the ovary is well worth the chance of a second operation from the psychic standpoint

Renal Tuberculosis

Dr. Henry Dawson Furniss New York Of thirty-three personally observed cases in 20 per cent there was a history of other tuberculous lesions and of these 15 per cent were associated with pulmonary tuberculosis In 50 per cent of the cases, cystitis was the first symptom, in 15 per cent, microscopic hematuria, which was followed by cystitis The hematuria is vesical rather than renal in origin Renal or ureteral colic pain was seen in 15 per cent of the cases The cystitis was found to be the most distressing symptom, and engendered loss of sleep from frequent urination Nephrectomy was advised for this, before extensive bladder involvement had taken place Pyuria was present in every case Tubercle bacilli were found in slides in 85 per cent of the cases In all except early cases there was bladder involvement, characteristic of tuberculosis By the time the patients applied for treatment the lesions were advanced enough to show characteristic changes These were redness and induration of the ureteral orifice, often with nodular irregularities With progress of the disease the induration increased the meatus became more involved, the trigonum retracted, and the ureter shortened Later ulceration occurred and finally the whole bladder became lined with granulation tissue In cases of long duration the ureter was involved and in catheterized urine the finding of tubercle bacilli was evidence of tuberculosis of at least one kidney The general health of these patients was usually good In most cases nephrectomy was done, with ligation and division of the ureter The percentage of postoperative fistulas was about the same whether drainage was used or not. Perhaps undrained cases gave better results It seemed better to excise the ureter through an extra incision, extraperitoneally Only one death occurred as a result of operation but this was in a case complicated with pulmonary tuberculosis About 30 per cent of postoperative fistulas have been reported but this did not seem detrimental to the health of the patients even though it lasted for as long as two years After the operation there seemed to be a typical tuberculin reaction, the exacerbation of other tuberculous processes and rise of temperature, this being apparently due to liberation of tuberculous material into the body About half of the patients seen were between 20 and 30 years of age.

DISCUSSION

Dr. Alfred M Wose, Syracuse It is important to get these cases early, because if one delays in sending these patients for cystoscopy, the bladder will contract and in many cases it is impossible to make a differential diagnosis of the urinary secretion, in fact, one cannot find the ureters One has then to base his observations on the bladder content and the clinical symptoms

Dr Hiram N Vineberg, New York My experience has been that the earlier I saw the patient, the better was the result The more the bladder is involved the less benefit the patient will have from the operation In any case of cystitis lasting for some time one should suspect tuberculosis

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

American Journal of Medical Sciences, Philadelphia

June CLI No 6 pp 781 936

1 Respiration Calorimeter in Clinical Medicine E F Du Bois New York
2 New (Histogenetic) Classification of Neoplasms and Its Clinical Value W C MacCarty Rochester Minn
3 *Saphenoperitoneal Anastomosis for Ascites B M Bernheim Baltimore
4 *Therapeutic Possibilities of Antitetanus Serum H E. Robertson, Minneapolis
5 Intestinal Stasis H Barclay and C A McWilliams New York
6 Wassermann Reaction in Pregnancy A M Judd Brooklyn.
7 Oxycephaly Its Operative Treatment Report of Cases W Sharpe New York
8 Cutaneous Tuberculin Reaction in Tuberculosis. F H Heise Trudeau N Y
9 *Nonteratomatous *Bone Formation in Human Ovary* G W Outerbridge Philadelphia
10 Gangrene of Lung Following Artificial Pneumothorax E N Packard Jr Saranac Lake N Y

3 **Saphenoperitoneal Anastomosis for Ascites**—Bernheim cites the case of a man, aged 68 years, who had suffered from ascites for over a year, the cause being an obstruction of the portal vein consequent on a cirrhosis of the liver A Talma operation had been done some months previously without relief Repeated tappings were the order of the day, at each tap several gallons of fluid being removed Under local anesthesia, Bernheim exposed the left saphenous vein for a distance of about 6 inches and cut it off at the lower end of the wound tying off both ends The peritoneal sac was exposed through a 2 inch incision just over the external ring, at which point a very small hole (about 12 cm) was made and the greater part of the ascitic fluid that was present—2 gallons—was drained off This done, the tissues overlying Poupart's ligament were undermined by means of a curved clamp, and the proximal end of the severed vein pulled up into the small incision, where a lateral anastomosis was done between the blood vessel and the peritoneum, ordinary blood vessel silk being utilized. The patient died two days later No cause whatever could be found to account for his death

4 **Possibilities of Antitetanus Serum.**—Robertson proposes that every case in which symptoms of tetanus appear be treated at once, without delay, with an intravenous injection of 3 000 units of antitetanus serum By this method every patient who exhibits the symptoms of tetanus is given the best possible opportunity of preserving his life. Difficult or dangerous surgical operations, such as the intracerebral method or intralumbar injection, need not be considered, the loss of time and local pain of subcutaneous injections are avoided and, what is of less theoretical but nevertheless often of more practical serious moment the use of large amounts of serum is obviated The method consists simply in the immediate insertion of 3 000 units of antitoxic serum into one of the veins of the elbow Furthermore it is of little or no value to repeat this dose twice a day or every other day or, in the large majority of cases at all The one injection of 3 000 units is amply sufficient to neutralize the toxin which might be elaborated and absorbed from any ordinary tetanus infection, and this antitoxin will remain effective in the blood stream for at least one week, namely, long enough to decide the issue in almost all cases of human tetanus If the case should become chronic or suffer a recurrence or any other special condition should develop which might indicate

the advisability of giving more antitoxin, there can be no objection to a second or even a third dose, but here again it should be emphasized that a small dose is fully as effective as a large one and a large dose is as unjustifiable the second time as it was the first

9 **Bone Formation in Human Ovary**—As a result of the study of fourteen cases from the literature and seven personal observations as recorded by Outerbridge it appears that true ossification of the ovary may occur independently of any neoplastic or teratomatous process Such bone formation is probably metaplastic in character, it occurs chiefly in corpora fibrosa or fibrous portions of the stroma, and particularly in ovaries from cases of pelvic inflammation In one instance of the personal series it involved the wall of a serous cystadenoma, and in one a spontaneously amputated ovary which was found adherent to the omentum at the bottom of Douglas' pouch, associated with complete atrophy of the corresponding tube

Journal of Experimental Medicine, Baltimore

June, XXIII, No 6, pp 703 825

11 *Development of Malaria Parasites in Three American Species of Anopheles W V King, New Orleans
12 *Intestinal Obstruction Study of Noncoagulable Nitrogen of Blood J V Cooke, F H Rodenbaugh and G H Whipple, San Francisco
13 Origin and Structure of Fibrous Tissue Formed in Wound Healing G A. Baitsell, New Haven, Conn
14 *Absorption of Epinephrin After Intratracheal Injection J Auer and F L Gates, New York
15 Production of Amyloid Disease and Chronic Nephritis in Rabbits by Repeated Intravenous Injections of Living Colon Bacilli C H Bailey, San Francisco
16 *Bacteriologic and Experimental Studies on Gastric Ulcer H L Celler and W Thalhimer, New York.

11 **Development of Malaria Parasites**—The experiments reported by King were undertaken for the purpose of determining the susceptibility of any species of anopheles to infection with malaria parasites As a result of these experiments *Anopheles punctipennis* is shown to be an efficient host of the organisms of tertian and estivo-autumnal malaria, *Anopheles crucians* of estivo-autumnal malaria, at least, and information has been obtained on the relative susceptibility of these two species and *Anopheles quadrimaculatus* The latter species has been considered to be the principal species concerned in the transmission of malaria in the United States With *Anopheles punctipennis,* developmental forms of the exogenous or sporogenic cycle of *Plasmodium vivax* were demonstrated in six (85 per cent) of the seven mosquitoes dissected, and the development of *Plasmodium falciparum,* in four (20 per cent.) of twenty specimens These four infections, however, occurred in a series of thirteen specimens fed on one person, so that the percentage was actually 33 With *Anopheles crucians,* oocysts or sporozoites or both oocysts and sporozoites of *Plasmodium falciparum* were found in nine (75 per cent) of the twelve specimens dissected. No tests were made with this species and *Plasmodium vivax* *Anopheles quadrimaculatus* was employed as a control species in the experiments and became infected in the following ratio eight (66 per cent.) of twelve specimens with *Plasmodium vivax,* and three (15 per cent) of nineteen specimens with *Plasmodium falciparum*

12 **Intestinal Obstruction**—This communication deals with analyses of the blood in intestinal obstruction, intestinal closed loops, and other acute intoxications The authors found that most cases of intestinal obstruction, especially with signs of acute intoxication, showed a high noncoagulable blood nitrogen If the reading is high, one may assume a dangerous grade of intoxication, but, on the contrary, one may not assume that a low reading gives evidence of slight intoxication, because a fatal outcome may be associated with a low reading Acute proteose intoxication due to injection of a pure proteose will show a prompt rise in blood noncoagulable nitrogen, even an increase of 100 per cent within three or four hours These intoxications also show a high blood content of creatinin and urea The residual or undetermined nitrogen may be very high A human case of intestinal obstruction with necropsy presented blood findings exactly similar to those observed in many animal experiments The kidneys in practically all these experiments are normal in all respects The authors suggest that it is possible that protein or tissue destruction rather than impaired eliminative function is responsible for the rise in noncoagulable nitrogen of the blood in these acute intoxications Transfusions of dextrose solutions often benefit intestinal obstruction, and may depress the level of the noncoagulable nitrogen in the blood Some cases show no change in noncoagulable nitrogen following transfusions and diuresis, and, as a rule, such cases present the most severe intoxication

14 **Epinephrin Absorption After Intratracheal Injection**—It is shown by Auer and Gates that a simple intratracheal injection of a solution in a normally breathing rabbit penetrates within a few seconds to the alveoli, chiefly those of the left lower lobe, that absorption is rapid and well maintained, and that the procedure may be repeated effectively a number of times even with a substance like epinephrin, which decreases absorption It was also shown that absorption of epinephrin from the lung could be obtained at a time when double the dose given intramuscularly exerted no blood pressure effect whatever, and that absorption could still take place after the development of pulmonary edema, when there was no undoubted dilution of the injected solution with a serum containing liquid and when a diminution of the absorptive field had occurred Absorption of liquids injected into the lung probably takes place largely through the capillaries of the pulmonary veins, to a slight extent possibly through the capillaries of the bronchial veins which empty partly into the pulmonary veins, partly into the azygos veins, and probably some absorption occurs also through the lymphatics By far the larger proportion of the absorbed material will thus be rapidly delivered to the left auricle and then to the left ventricle At each succeeding systole, as long as absorption continues, a fraction of the drug will be driven into the coronary arteries and be able to affect the musculature of the heart pump This fact ought to render the procedure of intratracheal injection a valuable method when it becomes imperative to stimulate a suddenly failing heart as promptly as possible by drugs of the digitalis group

16 **Studies on Gastric Ulcer**—Even though anhemolytic streptococci are present in practically all gastric ulcers, Celler and Thalhimer are not convinced that these organisms have been proved as yet to be the factor which either initiates the ulceration or prevents healing Nevertheless, the constant presence of streptococci in this type of lesion is a suggestive fact and further experiments to determine their significance are being undertaken

FOREIGN

Titles marked with an asterisk (*) are abstracted below Single case reports and trials of new drugs are usually omitted

Annals of Tropical Medicine and Parasitology, Liverpool

April, X, No 1, pp 1 164

1 Vomiting Sickness of Jamaica H H Scott
2 *Ankylostomiasis, Simplified Diagnosis and Treatment G D Whyte.
3 *Value of Differential Blood Counts in Diagnosis of Malaria. E R Armstrong
4 Three New African Midges H F Carter
5 Work on Reduction of Alkalinity of Blood in Cholera, and Sodium Bicarbonate Injections in Prevention of Uremia L Rogers
6 Technic of Estimations of Alkalinity of Blood S C Banerjee
7 Immunity to Yellow Fever H R Carter

2 **Ankylostomiasis**—The test suggested by Whyte depends on two facts (1) a trace of blood is constantly present in the feces of ankylostomiasis patients, and (2) there is a test for blood so sensitive as to reveal its presence in a dilution of 1 800,000 The only reagents employed are the test solution and hydrogen peroxid, and half a dozen specimens can be examined in ten minutes The reagent is prepared as follows 100 c c of a 20 per cent solution of caustic soda treated with 2 gm of phenolphthalein and 10 gm of zinc dust The bright rose colored solution is heated gradually until it has assumed a slightly yellowish tone The supernatant

fluid is poured off into a colored glass bottle and the access of air is prevented by the addition of a little liquid paraffin which floats on the top The test is made as follows To 2 c c of a watery solution of the feces is added 1 c c of the alkaline solution of phenolphthalin (namely, reduced, and therefore colorless, phenolphthalein) and then 1 drop of hydrogen peroxid In the presence of blood some of the phenolphthalin is reoxidized to phenolphthalein and a bright red color appears

3 **Value of Blood Counts in Diagnosis of Malaria**—Armstrong looks on a large mononuclear count of from 8 to 10 per cent as suspicious of convalescence from malaria, and one of 10 per cent or over as diagnostic of latent or actual infection He considers it safer to place the figure on which to diagnose malaria at a percentage at least double that found as an average in normal bloods in view of the many errors which may enter into such counts The differential blood count has been the means whereby a diagnosis for or against malaria was arrived at in 103 cases Forty-two cases were diagnosed as malaria by counts of 10 per cent or over, sixty-one cases were diagnosed as not malaria by low counts Of the forty-two cases, twenty-seven were correctly diagnosed Of the sixty one cases, six were definitely not malarial fifty-two were followed for some months and did not relapse, and in three no further decision could be made.

Archives of Radiology and Electrotherapy, London

May XX No 12 pp 395 428

8 Tuberculosis of Bones and Joints. R. W A. Salmond
9 Roentgen Ray Department of Scottish Women's Hospital, Royaumont, France. A Savill
10 Clinical Significance of Roentgenograms of Orbital Region H W Stenvers.
11 Case of Pin in Esophagus of Patient With Unsuspected Bilateral Cervical Ribs. F Emrys-Jones
12 Treatment of Scars of War N H M Burke.

British Medical Journal, London

May 20 I No 2890 pp 709 744

13 Soldier's Foot and Treatment of Common Deformities of Foot. R. Jones.
14 Causes and Prevention of Trench Foot. B Hughes.
15 Excystation of Entameba Histolytica (Tetragena) as Indication of Vitality of Cysts W J Penfold H M Woodcock and A. H Drew
16 *Amebic Dysentery in Man Who Had Never Left England. C Worster Drought and D D Rosewarne.
17 *Treatment of Puerperal Sepsis by Uterine Suction and Drainage. N Porritt.
18 Use of Galvanometer as Aid to Diagnosis of Nerve Lesions. C. N Longridge.
19 Simple Portable Refrigerating Box and Its Use as Temporary Incubator in Military Work. S Delepine.

16 **Amebic Dysentery in Man Who Had Never Left England.**—The feces of the patient whose case is discussed by Worster-Drought and Rosewarne were frequently examined throughout the illness, and active forms of *Entameba histolytica* were found up till the tenth day of treatment with emetin, but at no time afterward No cystic forms of the parasite were ever seen, although the motions were examined until three weeks after the patient's recovery, and no bacilli of the typhoid dysentery group were isolated The blood tested as regards agglutinating power against the dysenteric organisms "Shiga," "Flexner" and "Y" types proved negative. The tongue, which was furred from the beginning, continued so until about the seventh day with emetin injections, when it began to clear It was quite clean when they were stopped The liver was frequently examined, but at no time was any enlargement noted Abdominal pain persisted with diminishing severity until, practically, the motions were fully formed During the first ten days in the hospital he frequently complained of considerable pain after defecation The tenderness to the right of the umbilicus, mentioned on admission, had quite disappeared by the ninth day of emetin treatment, while that in the left iliac region did not disappear until three days after the motions were quite normal It is believed that this case was caused by a "carrier"

17 **Puerperal Sepsis Treated by Uterine Suction and Drainage**—Three cases are reported by Porritt in which he removed retained decidua from the uterus by means of the suction tube. He used a glass Budin's catheter to which the inlet end of a Higginson's enema syringe was attached It was passed into the uterus To secure the syringe to the Budin's catheter the inlet valve was removed The tube of the syringe between the bulb and the catheter was held firmly and the bulb squeezed, so as to drive out the contained air through the nozzle On releasing the pressure on the bulb, the valve behind the nozzle closed and prevented the return of the air There was then a vacuum in the syringe, and on releasing the pressure on the tube, between the bulb and the Budin's catheter, suction was exerted through the catheter within the uterus No air was drawn into the uterus, although the suction drew into the orifices of the catheter thick grumous, semipurulent masses, which were too big to pass through and, when the catheter was withdrawn, came with it Reintroduction of the catheter and suction drew out more of these thick pieces The vagina was syringed, and a gauze drain was inserted into the uterus Suction was applied to the uterus on two successive days The patients made a good recovery

Dublin Journal of Medical Science

May CXLI No 533 pp 299 369

20 Soy Bean Its Uses Action of Its Enzyme, Urease on Urea. W G Smith
21 Some Points in Connection With Puerperal Eclampsia W Smyly
22 Case of Ectopia Vesicae in Adult Treated by Transplantation of Ureters. H Stokes
23 Distribution of Cases of Cerebrospinal Fever in Military Camp G E Nesbitt.
24 Fractures and Fracture Dislocations. (To be continued) J S McArdle

Lancet, London

May 20 I No 4838 pp 1025 1068

25 Links in Chain of Research on Syphilis. J E. R. McDonagh.
26 *Case of Syphilis of Aorta C Allbutt.
27 Treatment of Head Injuries in Casualty Clearing Station. A. Don
28 *Two Cases in Which Lateral Ventricle Was Opened H. F Woolfenden
29 *Treatment of Hepatic Failure in Yellow Fever, Malaria and Other Conditions. A Balfour
30 Hysterical Mutism in Boy A. J Hall
31 Case of Palpebral Chancre. H. J McGrigor and D M Livingstone

26 **Syphilis of Aorta**—Allbutt urges that in all necropsies on syphilitic cases one should submit the thoracic aorta, and especially the ascending arch, to minute scrutiny, to section and microscopic examination

28 **Opening of Lateral Ventricle**—Although the lateral ventricle was opened in the course of operations for removal of a bullet and indriven bone from the brain in both cases cited by Woolfenden, the patients survived and made an almost complete recovery One patient was normal except for a slight affection of the higher speech centers The other had some loss of sensation to pain on left side

29 **Hepatic Failure in Yellow Fever, Etc**—Balfour points out the necessity in cases of delayed chloroform poisoning and toxemic jaundice of keeping up the supply both of sugar and of protein food, the latter in peptonized form The former is insured by the administration of glucose. It can be given by the mouth or as rectal enemas, solutions of 5 or 10 per cent. being used If pure glucose cannot be obtained, preserved (candied) fruits may be given, or, indeed, sugar in any form The necessity for protein is met by administering enemas of peptonized beef tea, eggs, or other protein material.

Archives des Maladies du Cœur, Etc, Paris.

May IX No 5 pp 189 236

32 Inversion of Viscera Three Cases. (Inversion viscérale.) A. de Castro
33 *The Oscillometer as Index of Permeability of Accessible Arteries. (L exploration de la perméabilite des arteres des membres par l oscillometrie.) A Cawadias.

33 **The Oscillometer in Testing the Permeability of the Arteries**—Cawadias called attention in 1912 to the advantages of the use of Pachon's simple oscillometer in estimating the circulation through a vessel Others have confirmed his statements, and the war has brought innumerable cases in which the information thus derived has proved of paramount importance (Matas study of the various tests for the pe-

pose was published in The Journal, Oct 24, 1914, p 1441) The oscillometer findings on the side in question and on the sound side are compared, both for the arms and legs, and the extent of the oscillations is registered The findings differentiate functional from organic lesions, and permit exact localization The method is particularly useful in the study of aneurysms and as a guide to operative procedures

Bulletin de l'Académie de Médecine, Paris

May 9, LXXV, No 19, pp 535 582

34 Roentgen Ray Localization of Foreign Bodies in the Head (Nouvel appareil de M Contremoulins pour la localisation radio logique des corps etrangers de la tete) Routier
35 *Wire for Suturing Fractured Large Bones (La suture metallique dans les fractures des grand os) O Laurent
36 *Vaccination Against Typhoid in Russian Army L. A. Tarasse vitch

35 **Wire for Suturing Fractured Long Bones**—Laurent extols the advantages of stout silver wire for suturing the fractured femur or humerus It holds the parts firm and does not interfere at all with the production of callus while the twisted ends of the wire emerging between the lips of the wound provide an ideal drain One suture is generally enough, or one suture supplemented by a ligature He never used more than two sutures The outcome is far better than with metal plates which are always more or less irritating The wire seems to be borne without causing irritation during the month or two it is required and then it is easily removed The wire suture is particularly advantageous when the focus has had to be opened up to remove sequesters, etc Among the typical cases related is that of a fractured femur with excessive callus by the end of fifteen months After osteotomy the stumps were held together with wire rings not drawn tight and extension was applied The limb gained 10 cm in length by this means The provisional support from the wire rings enabled the muscles to regain their normal tonus and length under extension In the discussion, Delorme referring to the ideal drain provided by the twisted ends of the wire, says that this "exteriorized metallic suture" offers better chances for proper treatment of sequesters than other technics

36 **Vaccinations in the Russian Army**—Tarassevitch relates that the Russian Medical Association passed a resolution in December, 1914, approving of antityphoid vaccination but not insisting on its compulsory application The following five months, however, brought such an array of favorable testimony from different countries that the authorities made it compulsory in the army and more than 20,000 liters of vaccine had been used in military and civilian circles by February, 1916 A monovalent vaccine was used at first, and later one made from six or eight strains of typhoid bacilli Vaccination against cholera was also introduced, and over half a million men have already been thus vaccinated, but without official consecration Encouraged by Kabeshima's experience in Japan, Castellani's in Italy and some in Russia, attempts have been made to vaccinate at one time against both typhoid and cholera The reaction was no more intense than to one vaccine alone After two injections the serum agglutinated typhoid bacilli at 1 500 or 1 800 or even 1 2,000 Agglutination of cholera germs occurred only at 1 200 One entire army in the Caucasus was vaccinated in this way A group of 25,000 men at Moscow were vaccinated the same day against smallpox, typhoid and cholera, and only 5 per cent presented a moderate or severe reaction

Presse Médicale, Paris

May 11 XXIV, No 27, pp 209 216

37 Reeducating the Maimed and Crippled to Use Their Limbs (La reeducation motrice individuelle, collective et mutuelle dans les impotences de guerre) P Sollier and Chartier
38 *Influenza in Infants (La grippe chez le nourrisson. Etude clinique) R Raimondi.

38 **Influenza in Infants**—Raimondi has found that infants may be affected with grip toward the end of October and later, but it is usually mild and lasts only three or five days With the latter part of January it begins to be more virulent, and from March to May presents its severest forms, and then it seems to die out Incubation may take from twelve to forty-eight hours All the children present the same kinds of special manifestations at the same time, as a rule One month all will have the tracheal type, with otitis, while at another time the bronchopulmonary manifestations will predominate, or the nervous manifestations will overshadow other symptoms, or the digestive apparatus may bear the brunt of the attack. Winter grip in infants lasts from ten to fifteen days, in the spring from eight to ten days The highest and most tenacious fevers he has encountered were with the gastro-intestinal forms of grip, especially with involvement of the liver Grip is a touchstone locating by preference in the organs that are below par naturally He has had only one case of the nervous form of grip terminate fatally, the other children recovered in four or five days The same child may have several attacks during one winter Overheating and overcrowding favor its return Infants that are kept in the house are more liable to it and its complications He advises that at the first sign of trouble the mucous membranes must be sterilized with petrolatum or oil containing 2 per cent resorcin, cleansing the tongue and mouth with a boric acid or bicarbonate solution When the temperature goes up he gives a bath at 36 or 37 C (98 6 F) morning and night for five or eight minutes If there is bronchial involvement, five or six tablespoonfuls of mustard flour may be added to the water in the infant's bathtub If the temperature keeps high, a towel wet with water between 28 and 32 C (82 4 and 89 6 F) may be used to pack the child, with rubber outside This pack may be left undisturbed for thirty or forty minutes or until the child wakes up The pack may have mustard added at need He says that cupping, especially when there is bronchitis, is efficacious even for children only a few days old At the first signs of induration of the lung, he injects emetine, repeating the dose four or five days in succession (0 01 gm per 1 c c), 0 25 c c the first month up to 1 c c from ten months to a year old It is in grippal bronchopneumonia, he reiterates, that emetine hydrochlorid is most effectual The heart may have to be sustained with one or two injections a day of camphorated oil If the child is getting breast milk, the amounts should be reduced one half and milk should be diluted with water or mineral water or *bouillon de legumes* After four days without fever the child may be taken outdoors but not for longer than ten minutes at first, even on a fine day This must be done very cautiously to ward off relapses and complications He refrains from vaccinating infants during the special grip months, February and March, unless there are special reasons

Gazzetta degli Ospedali e delle Cliniche, Milan

May 7, XXXVII, No 37, pp 577 592

39 *Experimental Tetany During Pregnancy After Partial Removal of Parathyroids in Early Life (Tetania da insufficienza para tiroidea sperimentale nella gravidanza ed eclampsia) A Mas saglia

39 **Inadequate Parathyroid Functioning as Cause of Eclampsia**—The parathyroid theory of eclampsia and its corollary, parathyroid treatment, have long been advocated by a number of Italian and a few other writers Massaglia here reports two experiments which sustain this view, the findings confirming those previously obtained by Vassale and others in this line In the course of eighteen months Massaglia operated on two young female dogs, removing both external and one of the internal parathyroids, when they were about ten weeks old Each bore the operation well and grew up apparently healthy except for traces of albumin in the urine As the animals became gravid they seemed to thrive for about two months, and then each in turn developed severe tetany Massaglia and Vassale regard this experimental tetany as the equivalent of eclampsia in women, and the fact is emphasized that the tetany retrogressed under parathyroid treatment. In both, the parathyroid insufficiency evidently remained latent until roused by the stress of the pregnancy to active manifestations This is likewise the case with eclampsia in women, appearing only during a pregnancy or lactation The two bitches had two or three litters each and a tendency to tetany was

apparent also in the later pregnancies but less marked than at first. It soon subsided under parathyroid treatment and it was never apparent outside of a pregnancy

Policlinico, Rome

May XXIII Medical Section No 5 pp 129 160

40 *Symptomatic Importance of the Auricular Liver Pulse (Il significato semeiotico del polso epatico auricolare con speciale riguardo alla sua presenza nel ritmo di galoppo e nei vizi congeniti del cuore destro) C Pezzi
41 *When the Oculo-Cardiac Reflex Induces Extrasystoles (Riflesso oculocardiaco e estrasistoli) G B Ferralis and C Pezzi

40 **The Auricular Liver Pulse**—Pezzi has had opportunity to study the liver pulse in a number of cases, and was impressed by the constancy of the auricular type in cases of gallop rhythm and of congenital deformity in the right heart He gives the cardiograms and clinical details with the necropsy findings in four cases of gallop rhythm They confirm the assumption that gallop rhythm is the result in most cases of exaggerated functioning of the auricle It forces suddenly a large amount of blood into the ventricle, abruptly stretching it This sudden distention is facilitated by the walls of the ventricle being somewhat relaxed, and it causes a perceptible sound Pezzi's experience indicates that this presystolic liver pulse frequently accompanies chronic nephritis with gallop rhythm Hence the discovery of the auricular liver pulse with gallop rhythm does not have the import in respect to tricuspid stenosis that has hitherto been accepted It may be encountered also with congenital defects and other heart affections When noted with mitral disease, it suggests concomitant tricuspid mischief, but with gallop rhythm it does not necessarily indicate tricuspid deficiency, and it usually diminishes as the gallop rhythm returns to normal With congenital defects there is more liable to be tricuspid trouble when there is auricular liver pulsation

41 **Oculocardiac Reflex and Extrasystoles**—Ferralis and Pezzi have been studying on twenty persons the changes induced in the heart action by pressure on one or both eyeballs The stimulation of the vagus which it realizes may induce various reflex phenomena involving both heart and respiration, similar to chemical or electric stimulation of the nasal mucosa or the sensory terminals of the peripheral nerves at other points The work was undertaken to see whether the heart could be made to contract prematurely by pressure on the eyeballs The tests were positive in five of the twenty persons examined extrasystoles developing as the eyeballs were compressed This positive series demonstrates the connection between extrasystoles and the pneumogastric nerve. In three patients with chronic nephritis and high arterial tension, pressure on the eyeballs had a marked retarding action on the heart There was a tendency to spontaneous systoles in these cases but while pressure was being applied to the eyeballs no signs of premature contractions were evident This shows the complexity of the mechanism of extrasystole production by means of the vagus system, but the facts cited apparently demonstrate that the pneumogastric is capable of creating in the myocardium a condition that favors the occurrence of extrasystoles The spontaneous extrasystoles and those induced by pressure on the eyeball gave apparently identical tracings, showing a single center of impulse production

As extrasystoles are most common in the nervous, this speaks also for their reflex origin In some cases mere stimulation of the skin was enough to bring on premature contractions of the heart. These and other facts cited indicate that the pneumogastric has some action at least indirect, in producing or maintaining extrasystoles, and hence atropin may be regarded as indicated in cases of pathologic contractions of the heart Atropin has merely a symptomatic action but as such it is useful in addition to its accelerating influence on the heart action. Digitalis in certain cases of the kind does actual harm The details of the five positive cases are given In one, as pressure was applied to the eyeball, the ventricle began to beat automatically and irregularly, interrupted by an extrasystole The extrasystole occurred again in the same way on repeating the test later This patient was a girl of 12 with an apparently sound heart, but the electrocardiogram shows that there was a brief period of auricular fibrillation following the retarding phase This has been observed in animals when the stimulation of the pneumogastric surprised the nerve in a phase of overexcitability In one young woman with Banti's disease, the oculocardiac reflex was elicited with slight pressure on the eyeballs and the heart action was arrested for more than five seconds Only one extrasystole occurred and the contraction started in the left ventricle One extrasystole occurred also in a boy of 11 with mitral trouble left by articular rheumatism No spontaneous extrasystoles were observed A girl of 17 with acute rheumatism presented the liveliest reflex response of all to the oculocardiac test The heart action was retarded and once completely arrested for the longest period of any of the tests On two occasions there was a series of extrasystoles, starting in the right ventricle. This and similar cases testify that the action of infectious toxins on the pneumogastric may be responsible for more of the cardiovascular disturbances and hence that the latter may present a more favorable prognosis than is generally realized

Semana Medica, Buenos Aires

March 16 XXIII No 11 pp 291 318

42 Puericulture and Infanticide. A D'Alessandro
43 The Anti Alcohol Year (El año antialcoholico — 1915) R Hercod

March 23 No 12 pp 319 346

44 Treatment of Vertebral Tuberculosis (Tratamiento del mal de Pott) J M Jorge
45 Principles and Technic of Roentgen Ray Examination and Treatment (Radiologia.) C M Perez.
46 Progress of Prohibition (Progresos del movimiento templario internacional) V Delfino

44 **Treatment of Vertebral Tuberculosis**—In concluding his general review of this subject, Jorge relates that he has performed the new operation for vertebral caries in a dozen cases and has found Albee's technic the simplest and best in its outcome Only in one case, in which the patient failed to get the proper after-treatment, the gibbus increased

Nederlandsch Tijdschrift voor Geneeskunde, Amsterdam

*April 29 I No 18 pp 1501 1588**

47 *Deafness and Heredity (Doofheid en erfelijkheid) H Burger
48 *Dermatology and Immunity Allergy and the Percutaneous Tuberculin Reaction W L L Carol Commenced in No 17
49 *Revaccination Neuralgia and Other Complications. (Revaccineeringsneuralgieen) G A M Van Wayenburg (De vierdaagsche ziekte na herenting) P W C M Busch

47 **Deafness and Heredity**—Burger discusses the various types of deafness that occur with a familial and inherited stamp, and shows that it is a mistake to diagnose otosclerosis merely on the basis of deafness inherited in the family The deafness is liable to be of quite another type, the trouble being in the sound-perceiving rather than in the sound-conducting apparatus In the labyrinth type the deafness comes on about 30 or 38 and slowly progresses to the age of 50 when it grows rapidly more complete The perception of high and low sounds, and bone and air conduction of sounds also differ from those with otosclerosis, as he describes in detail He charts three generations of a family tree showing twenty-nine members more or less hard of hearing or totally deaf out of a total of eighty-seven members not including three deaf in a previous generation He examined five of the deaf members of the family and found in two the progressive internal ear type of deafness, in another, premature senile deafness, and in two others the otosclerosis type of deafness It seems probable that in this family the organ of hearing is physiologically inferior and yields abnormally readily to morbid influences of various kinds This predisposition is inherited, not any special type of ear disease The predisposition may never encounter anything to rouse it to an active process and, if this does occur, the active process may be of different types in different members of the family with the inherited taint This assumption explains also, he says congenital deafmutism and he protests against the usual classification of this into the congenital and acquired types A deaf child that has never spoken is regarded as a congenital deafmute, and the possibility of deafmutism as

the result of a brain or meningeal inflammatory process in early infancy is quite overlooked

He is inclined to agree with Hammerschlag's dictum that the difference between deafmutism and progressive labyrinth deafness is one of degree only The anatomic basis for each is strikingly similar The fact that the labyrinth deafness does not develop until late in life is no sign that the sound-perceiving apparatus is not constitutionally inferior Other arguments in favor of this assumption are the remains of hearing in certain deafmutes, and the cases of congenital partial deafness—this is always of the labyrinth deafness type, and in his cases of this kind the deafness displayed no progressive tendency A still further argument is the labyrinth deafness which develops in the young and grows rapidly worse between 15 and 20 This latter has been observed as a familial affection Other facts cited in evidence are that Kuiper found atrophy of the stria vascularis cochleae in the internal ear of Japanese dancing mice, and Mayer found the same in persons with otosclerosis, while this has long been known to occur in deafmutes On the other hand, Politzer reported some years ago finding foci of new bone growth—spongiosa—in the labyrinth of deafmutes Koerner advised persons with otosclerosis to refrain from marrying, so as to carry their otosclerosis into the grave with them But Burger says that this prohibition, to be effectual, should extend also to the brothers and sisters of persons with otosclerosis, as they may have inherited the same tendency and be liable to transmit it, although this "determinant" has remained latent in them "In fact," he exclaims, "think of the latent dangerous determinants any one of us may be carrying around! At the twelfth generation each of us has 4,096 ancestors!"

49 **Revaccination Neuralgia.**—Van Wayenburg relates that during the recent extensive revaccination of the adult populace at Amsterdam, a number complained of severe neuralgic pains starting in the back and spreading to the stomach and abdomen They were like the pains of extensive herpes zoster, without the eruption, and in some cases were accompanied by vomiting He was unable to discover any tender points This neuralgia developed exactly on the fourteenth day in most cases, and lasted for five or six days, leaving merely a little lassitude The puzzling syndrome suggested kidney or gallstone colic or a pancreas affection He has been unable to find any record in the literature of this revaccination neuralgia

Hospitalstidende, Copenhagen

May 6 LIX, No 18, pp 417 440

50 *Peritonitis From Gonorrheal Disease of Ovaries and Tubes (Om akut diffus Peritonitis ved den gonorrhoiske Salpingo Oophoritis) P Zachariae

May 10, No 19, pp 441 464

51 *Cholecystitis Without Concretions in Paratyphoid Carrier (Et Tilfælde af Cholecystitis perforans sine concremento hos en Paratyfusbaciludskiller) J Nordentoft

52 *Single Intervention for Abortion and Preventing Further Conception (Abortus provocatus og Sterilisation i samme Séance) E Hauch

50 **Peritonitis from Gonorrheal Tube or Ovary Disease**—Zachariae reports three cases of acute diffuse peritonitis developing suddenly from exacerbation of chronic gonorrheal salpingitis practically latent hitherto No bacteriologic tests were made as negative findings are the rule at this stage of gonorrheal disease of the adnexa The aspect of the lesions rendered gonorrhea absolutely certain Whether to drain or not after the laparotomy, when the peritonitis is still in its first stage, is a matter of choice He drained in his one case of the kind but saw equally good results and healing by primary intention in similar cases in which the wound was sutured at once In his service, no morphin or other powerful sedative is given laparotomy patients until after flatus has been passed At most they get 1 gm aspirin Saline infusion or the Murphy drip is a routine measure Peritonitis from adnexa disease is of a milder course, as a rule, than when the source of the trouble is located higher in the abdomen The peritoneum's absorbing properties are most pronounced in the upper abdomen and grow less proportionally downward As to operative treatment, Zachariae comments on the remarkable success of bed rest, moist heat, douches, ichthyol tampons, etc., in inducing absorption of large effusions and tumors in the adnexa in a surprisingly large number of cases The impacted uterus grows more movable while the enlarged tubes dwindle in size until they can no longer be palpated He declares that as salpingitis is always bilateral and sooner or later both tubes will have to go, when removing one it is better to remove both He advises also to remove one or both ovaries, saying that possible resulting deficit phenomena are not to be considered in comparison with the disturbance liable to be set up by a pathologic ovary left behind Leaving the uterus does no harm as endometritis and metritis promptly subside after the diseased ovaries are gone Only when the uterus can be removed with ease is it wise to do it. According to some recent statistics from Schauta's clinic, conservative treatment failed and operative measures became necessary in 11 3 per cent of 6,000 *cases Radical treatment* ensured a permanent cure in 93 5 per cent, while this was realized with conservative measures only in 72 2 per cent The mortality was 3 5 per cent Widespread diffuse peritonitis from gonorrheal adnexa disease should be operated, even during the acute phase, but circumscribed peritonitis generally subsides under rest and conservative measures, with or without paracentesis But if the tumor persists unmodified through rational treatment kept up for months, then operative measures should be considered

51 **Perforating Cholecystitis in Paratyphoid Bacilli Carrier**—Nordentoft's patient was a primipara of 24 who had apparently recovered from paratyphoid a few weeks before Then symptoms developed suggesting acute appendicitis or cholecystitis The operation revealed the gallbladder distended and hard, with pus exuding from an opening in it. There was ulceration at two points and paratyphoid B bacilli were found in the gallbladder content No gallstones could be discovered and there was no jaundice No paratyphoid bacilli could be detected in the urine and stools later Nordentoft compares his case with the literature on cholecystitis without gallstones but he has been able to find only one case of paratyphoid infection of the biliary passages on record This was in a young woman with a history of both typhoid and paratyphoid The gallbladder was removed on account of attacks suggesting gallstone cholecystitis The patient ceased to pass paratyphoid bacilli in stools and urine thereafter, but cholecystectomy does not always prove effectual in this respect Pribram and Messerschmidt have had disappointing experiences in this line Kehr insists that when the gallbladder is removed for typhoid infection—as he has done in ten cases—the hepatic duct should be drained and the drainage kept up as long as the bacilli are found in the bile In Nordentoft's case, after a brief respite the patient had new attacks of pain, starting in the right hypochondrium and spreading through the back and shoulder, with jaundice and high fever and paratyphoid bacilli were found again in the stools It is evident that the paratyphoid bacilli are not restricted to the gallbladder but may lurk elsewhere in the body

52 **Abortion and Sterilization at One Operation**—Hauch analyzes the various procedures for this purpose and describes a method which he has applied in two cases, apparently demonstrating its efficiency It is simple and easy when the pregnancy is not past the third or fourth month Later than this it will have to be done by the abdominal route Through an anterior colpotomy, the bladder is detached and the peritoneum is opened The uterus is then palpated to see if it is loose and not bound down by adhesions If any are found they are broken up The fundus of the uterus is then brought down into the vagina and a small transverse incision is made in the fundus, and the ovum pops out entire as a rule With a curet the relics of the decidua are removed also, and the incision is sutured in two tiers The tubes are then resected for a space of 2 or 3 cm and the uterine stumps allowed to slip back under the peritoneum Two or three stitches are then taken in the peritoneum and the colpotomy incision is sutured The whole procedure is complete in twenty or thirty minutes

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Annales de gynecologie et d obstetrique. M 22 francs Paris.
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This is an index not only to the reading matter in The Journal, but also to original articles in the principal medical periodicals of this and other countries The reading matter appearing in The Journal is distinguished by the use of **black-faced numerals**

The letters used to explain in which department the matter indexed appears are as follows "E" Editorial, "C" Correspondence, "T" Therapeutics, "Ml," Medicolegal, "P," Propaganda for Reform, "ME," Medical Economics, "ab," abstract, the star (*) indicates an "Original Article" in The Journal.

This is a subject index and one should, therefore, look for the chief word, with the following exceptions "Book Notices," "Deaths" and "Society Proceedings" are indexed under these titles at the end of the letters "B" "D" and "S" Matter pertaining to the Association is indexed under "American Medical Association"

All matter is indexed under the most important word of the heading used in The Journal, and also under the subject heading For instance, abscess of the brain will be found under "abscess," as well as under "brain" Such titles as "ocular manifestations, etc.," have been indexed under "Eye" Cross references have been liberally used

An innovation in this index is the addition of the name of the author in brackets following the subject entry In case there is more than one author only the first is given

The figures in parentheses refer to the paragraph, the number following to the page in The Journal.

ACID hydrochloric as decolorizing agent for tubercle bacillus [Kellty] ***1619**

This reference is to an original article in The Journal, as shown both by the star and by the black-faced numerals indicating the page

ARSENIC in sodium cacodylate iron cacodylate and potassium arsenite amount of **1343**

This reference as indicated by the black-faced figures, is also in The Journal and on turning to page 1343 we find an answer to a question in the Department of Queries and Minor Notes

ABSCESS tongue [White] (86) **1167**

In this reference, the (86) indicates that the article is in the Current Literature Department and the fact that the page number is in black-faced type shows that the article is abstracted and discussed in The Journal Turning to page 1167, we find (86) refers to an article by J V White in the *Michigan State Medical Society Journal,* March

ABDOMEN wounds gunshot tabular statement of 500 [Wallace] (21) 1169

The fact that in this last reference the page is given in ordinary type indicates that only the title of the article is given Turning to page 1169 we find that the numeral (21) refers to a paper on that subject by C Wallace which appeared in the *Lancet,* March 4

In the Author's Index are the names of the authors of articles which have appeared in The Journal of the American Medical Association and of articles that have been listed from week to week in the Department of Current Medical Literature as having appeared in other journals The black-faced numerals indicate that the article is in The Journal, either in full or in abstract The star (*) preceding the page number indicates an original article.

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RHODE ISLAND Providence, July 6 7 Sec, Dr Gardner T Swarts, Room 313 State House, Providence

SOUTH CAROLINA Columbia, June 13 Sec, Dr A Earle Boozer, 1806 Hampton St, Columbia

SOUTH DAKOTA Deadwood, July 11 Sec, Dr Park B Jenkins, Waubay

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Indiana January Report

Dr W T Gott, secretary of the Indiana State Board of Medical Registration and Examination, reports the written examination held at Indianapolis, Jan 12-14, 1916 The total number of subjects examined in was 16, total number of questions asked, 100, percentage required to pass, 75 The total number of candidates examined was 8, of whom 7 passed, including 1 candidate who was granted a registration license, and 1 failed Twenty-two candidates were licensed through reciprocity The following colleges were represented

College	Year Grad	Per Cent
PASSED		
Woman's Medical College, Chicago	(1890)	75
Indiana University	(1914)	84 6
Harvard University	(1913)	89 1
University of Michigan Medical School	(1915)	85 4
University of Toronto	(1906)	84 1
National School of Medicine, Morelia	(1912)	82 7
FAILED		
Kentucky School of Medicine	(1890)	61 7

College	Year Grad	Reciprocity with
LICENSED THROUGH RECIPROCITY		
Bennett Coll of Eclectic Med and Surg	(1885)	Wisconsin
Chicago College of Medicine and Surgery	(1914)	Illinois
Hahnemann Med Coll and Hosp, Chicago	(1901)	Illinois
Hering Medical College	(1913)	Illinois
Northwestern University	(1913)	Illinois
Rush Medical College	(1913)	Illinois
Fort Wayne College of Medicine	(1891)	Ohio
University of Louisville (1907) Illinois (1912)	(1913)	Kentucky
College of Phys and Surgs, Baltimore	(1912)	W Virginia
Maryland Medical College (1902) West Virginia,	(1913)	Penna
University of Maryland	(1900)	N Carolina
Eclectic Medical College, Cincinnati	(1896)	Illinois
Starling Ohio Medical College	(1912)	Ohio
Pulte Medical College	(1896)	Ohio
University of Cincinnati	(1914, 2)	Ohio
Jefferson Medical College	(1914)	Penna
University of Pittsburgh	(1912)	Penna
University of Tennessee	(1879)	Kentucky

College	Year Grad	No Licensed
LICENSED ON SATISFACTORY CREDENTIALS		
University of Louisville	(1868)	1

Pennsylvania January Report

Mr N C Schaeffer, secretary of the Pennsylvania Bureau of Medical Education and Licensure, reports the written examination held at Philadelphia, Jan 18-20, 1916 The total number of subjects examined in was 5, total number of questions asked, 50, percentage required to pass, 75 The total number of candidates examined was 67, of whom 59 passed and 8 failed Eight candidates were licensed through reciprocity The following colleges were represented

College	Year Grad	Total No Examined
PASSED		
American Med Missionary College	(1902)	1
Chicago College of Med and Surg	(1914)	1
Hahnemann Med Coll and Hosp, Chicago	(1905)	1
University of Louisville	(1902) (1912)	2
College of Phys and Surgs., Baltimore	(1914)	1
Johns Hopkins University	(1914)	1
University of Maryland	(1914)	1
Boston University	(1914)	1
Harvard University	(1912)	1
Tufts College Medical School	(1913)	1
Columbia University, Coll of Phys and Surgs	(1913)	1
Fordham University	(1913)	1
University of Bellevue Hosp Med Coll	(1911)	1
Jefferson Medical College	(1913, 2) (1914, 18)	20
Medico Chirurgical College of Philadelphia	(1914)	8
Temple University	(1913) (1914, 3)	4
University of Pennsylvania	(1913, 1) (1914, 7)	8
University of Pittsburgh	(1914)	2
Woman's Medical College of Philadelphia	(1914)	2
University of Texas	(1912)	1
FAILED		
University of Louisville	(1912)	1
College of Phys and Surgs, Baltimore	(1914)	1
Maryland Medical College	(1912) (1913, 2)	3
Woman's Medical College of Pa	(1908)	1
McGill University	(1915)	1
University of Genoa, Italy	(1912)	1

College	Year Grad	Reciprocity with
LICENSED THROUGH RECIPROCITY		
George Washington University	(1911, 2)	Dist Colum
Howard University	(1910)	W Virginia
Washington University	(1913)	Missouri
Ohio State University College of Medicine	(1914)	Ohio
Jefferson Medical College (1912) Maryland,	(1913, 2)	Delaware

South Dakota January Report

Dr Park B Jenkins, secretary of the South Dakota State Board of Health and Medical Examiners, reports the practical and written examination held at Pierre, Jan 11-12, 1916 The total number of subjects examined in was 13, total number of questions asked, 110, percentage required to pass, 75 The total number of candidates examined was 5, of whom 4 passed and 1 failed The following colleges were represented

College	Year Grad	Per Cent
PASSED		
Bennett Medical College	(1914)	87 4
College of Phys and Surgs, Chicago	(1905)	81 2
Rush Medical College	(1913)	92 6
University of Illinois	(1913)	87 7
FAILED		
Baltimore Medical College	(1901)	60 4

Book Notices

THE DUCTLESS GLANDULAR DISEASES. By Wilhelm Falta. Translated and Edited by Milton K. Meyers, M.D., Neurologist to the Lebanon Hospital, Philadelphia. Foreword by Archibald E. Garrod, M.D., F.R.C.P., F.R.S., Physician to St. Bartholomew's Hospital, London. Second Edition. Cloth. Price $7 net. Pp. 674, with 101 illustrations. Philadelphia: P. Blakiston's Son & Co., 1916.

The book contains an introductory chapter on the embryology and general physiologic relations of the ductless glands. This is followed by two chapters on the diseases of the thyroids. The diseases of the parathyroids, thymus, hypophysis, pineal body, suprarenals, pancreas and the gonads are each accorded a chapter. There is one chapter on pluriglandular diseases (multiple glandular sclerosis, giantism), and three chapters on diseases which, according to Falta, are not directly traced to disarrangement of the endocrine glands, such as status lymphaticus, infantilism, mongolism, chondrodystrophy and the different forms of obesity.

A careful perusal of the volume leaves the impression that the author is too dogmatic in a field in which so much is as yet unsettled. Thus he states (p. 24) as demonstrated facts that "all the ductless glands are supplied with vegetative nerves and their function is thus in a great measure regulated by the nervous system" and further that "the ductless glandular system influences the excitability of the vegetative (sympathetic) nervous system by the hormones they give off to the circulation." Both of these generalizations as applied to all the endocrine glands are quite in advance of facts, and time may prove them in part contrary to facts.

Falta regards all endocrine gland diseases as due either to a hypo-activity or a hyperactivity of the glands. Thus he speaks of diseases due to hyperfunction of the parathyroids and the suprarenals, hypergenitalism, etc. This is logical and may be a useful working hypothesis, but the author does not always distinguish between working hypotheses and conclusions based on facts. In the chapter on diseases of the suprarenals the author bases all his discussion on the old vascular tonus theory of suprarenal function despite the fact that this theory is rendered untenable by the work of Cannon, Hoskins and others in recent years. The absence of even a reference to such fundamental work can hardly be excused in a monograph of the ductless glands published in 1916.

The numerous illustrations are excellent and would in some cases have been more useful if accompanied by more detailed explanations. The sixty-eight pages of references constitute one of the most useful parts of the volume. Many important papers are not found in this list but are cited in the addenda given by the American editor at the end of each chapter.

COLON HYGIENE. Comprising New and Important Facts Concerning the Physiology of the Colon and an Account of Practical and Successful Methods of Combating Intestinal Inactivity and Toxemia. J. H. Kellogg, M.D., LL.D., Superintendent of the Battle Creek Sanitarium. Cloth. Price $2 net. Pp. 393. Battle Creek: Good Health Publishing Company, 1915.

This book is written for the layman, yet "the writer does not desire to convey the impression that the sufferer from severe constipation can safely undertake to act as his own physician but rather to enable him to cooperate with the wise up-to-date physician." The subject of constipation is discussed thoroughly in all its phases, but what is said could have been said in much less space, had there not been so much repetition. Many statements are repeated over and over again. The author may have thought this necessary to impress them on the lay mind, but too much repetition becomes tiresome even to the layman. If the object of the book is to make the layman believe that he is sick and that his sickness is due to the fact that his bowels do not move often enough it will probably accomplish its purpose. It is quite proverbial that when a lot of symptoms are detailed in an enticing manner to the layman the imagination immediately becomes active, and the symptoms are at once appropriated and become a part of the individual. If such is the case when a few symptoms are mentioned what must be the effect when almost all of the ills to which flesh is heir are vividly described as due to constipation, "a disease so universal in civilized communities," that it "may justly be looked upon as among the fundamental causes of the race degeneracy which is becoming every day more apparent in all highly civilized communities." It is certainly assuming much to say that all highly civilized races are degenerating. It is freely admitted that constipation is a very common complaint, but its consequences are not nearly so calamitous as a few writers would have us believe. It seems to be a fad nowadays to attack the colon. Just because a few patients have had their colons removed and have lived, behold, the colon is a useless organ, the changes taking place in it are the cause of old age, ergo take out the colon and live forever. Constipation is a common condition, and it is frequently harmful, but it is not the cause of all the ails of the flesh. If the constipated layman could only skip the parts that are overdrawn and read those that relate to proper exercises, diet, etc., he might profit by the book.

Miscellany

The Industrial Incidence of Tuberculosis

Some of the state laws provide for compensation to workmen not merely for accidental injury, but for any disability arising out of and in the course of employment, that is, compensation for disease, provided it can be shown to be due to the work in which the employee is engaged. This makes the question of the incidence of disease in industry an important one in the administration of the law. It is also a complex problem, for a man who is failing in health owing to his occupation may change employment repeatedly, and the occupation in which he is engaged when he finally becomes incapacitated may not be responsible for his condition. E. F. McSweeney, who, with Prof. Selskar M. Gunn, was commissioned by the Massachusetts State Board of Labor and Industry and the Industrial Accident Board to investigate the industrial bearings of tuberculosis, in a preliminary report (Industry and Tuberculosis, *Journal of Outdoor Life*, April, 1916, p. 99) says that labor and occupation undoubtedly constitute an important factor in the "causes" of tuberculosis, but that no particular kind of work can be said to "cause" the disease. In the records of all the hospitals and sanatoriums examined women of the home—housewives and domestics—led the list of occupational classes affected by tuberculosis, constituting from 22 to 28 per cent. of the total. Clerks, including salespeople, bookkeepers and stenographers, came next on the list in all sets of records. These two classes—houseworkers and clerks—show the influence of indoor confinement in the production of tuberculosis. Day laborers—workers on streets, roads, railroads, subway excavation, etc.—constituted the third largest class; in their case the favorable influence of outdoor occupation was offset by exposure to dust, long and uncertain hours, night work, temptation to drink, etc. Miscellaneous factory workers, including those employed in the making of buttons, corsets and typewriters, but not in the leading industries of the state, came next. The shoeworkers were fifth on the list, furnishing more tuberculosis patients than any other single industry in the state. Dust and poisons from blacking, dyes, polishes, etc., were regarded as the unhygienic elements in this industry. Mill operatives—workers in the cotton, hosiery, paper, silk, wool and worsted industries—came next. Teamsters, waiters and waitresses, seamstresses and dressmakers; tailors and tailoresses, stoneworkers, woodworkers, bakers, metalworkers, printers and jewelers are among the workers whose occupations show unduly high tuberculosis incidence. Tuberculosis seems to be the most serious occupational disease, but, owing to the difficulty of putting exact responsibility for the condition on the industry in which it occurs, McSweeney believes that tuberculosis workers will seldom be able to benefit from the Massachusetts compensation law. There is much need, he concludes, for the study of the exact effect of occupation on disease.

Medicolegal

Injury Followed by Gonorrheal Infection—Not Loss of Eye

(Cline vs Studebaker Corporation et al (Mich), 155 N W R 519)

The Supreme Court of Michigan reverses and sets aside an award, under the workmen's compensation act, that treated the injury as the loss of an eye, rather than as a partial loss The court says that the fact that a piece of steel flew into the claimant's right eye in the course of his employment seemed fairly well established But it was not shown that this flake of steel directly caused the subsequent impairment of vision, that, on the contrary, must be attributed to a gonorrheal infection which set in Nor was it probable, from the testimony of the physicians, that the germ which caused the infection was on the steel itself They stated, however, that such a germ might get into the eye from a towel, from washing utensils, from the straps or rails of a street car, and in similar ways The burden was therefore on the claimant to show by a preponderance of evidence that the infection arose out of and in the course of his employment, instead of at some other time and in some other way In short, under the circumstances, it was for the claimant to show that the infection was connected with the accidental entry of the steel into his eye In instances like this, where the claimant himself is personally free from the disease, it is hardly possible that the source of infection can be shown absolutely by direct evidence Nor is that necessary That the claimant was himself free from the disease up to the time of the accident was the testimony of the physician who attended him, and the finding of the industrial accident board The gonorrheal germ must have come from some outside source It must also have been received not later than the time of the accident to have developed into the condition found by the physician two days afterward, according to his testimony These conditions, in connection with the fact, as shown, that an injured eye is more susceptible to the infection than a normal eye, and with the further fact that at once, after the accident, a fellow workman examined the eye, using for the purpose a match wrapped in a piece of cloth, created a considerable degree of probability that the germ got into the eye in the attempt to remove the steel And this probability was sufficient to warrant the board in finding that "the infection which destroyed the sight of the eye is not reasonably accounted for except as coming through or resulting from the accident" If the germ was introduced in an attempt to remove the flake of steel from the eye, it was a direct consequence of the accident, and arose out of and in the course of the employment The attempt to remove the particle of steel was a natural and necessary result of its entry into the eye The net result of tests by two experts was that, when using proper glasses, the claimant had 50 per cent of his sight, while without them he had only 10 per cent Under these circumstances it seems impossible to say that the injury resulted in the loss of the eye The use of glasses is a very ordinary occurrence, both by the young and the old Ninety per cent of the sight is not lost when it can be diminished to 50 per cent by the use of common appliances And it is the duty of the sufferer to minimize the injury as much as he reasonably may The statute does not provide compensation for the partial loss of an eye under such circumstances

Restricting the Use of Second Hand Material to Protect Public Health

(People vs Weiner (Ill), 110 N E R 870)

The Supreme Court of Illinois reverses a judgment of conviction of the defendant of violating the statute which took effect July 1, 1915, regulating the making and renovating of mattresses, quilts or bed comforters, and regulating the sale thereof The court says that the provisions of Sections 1 and 2 of the statute are arbitrary and unreasonable, and must be held unconstitutional and void The evidence showed that second hand bedding does not necessarily convey infectious or contagious diseases, and that a lawful business of selling or dealing in such may be carried on without danger to the public health It is the nature of the previous use, condition or exposure in respect to contagious or infectious diseases which makes the use of second hand material dangerous in the manufacture of mattresses, comforters and quilts, and not the mere fact of the previous use of such material by other persons It is eminently proper to require that material be free from germs of contagion and infection before being used in mattresses, comforters or quilts, whether the material be second hand or new, but the possible danger to health or safety does not justify the absolute prohibition of a useful industry or practice where the danger can be dealt with by regulation The statute does not attempt to prohibit the use of second hand mattresses, but does prevent their ever again being used in the manufacture of other mattresses which are to be sold To prohibit absolutely the use of such material in the manufacture of mattresses for sale when not inherently dangerous and when it may be rendered safe by reasonable regulation is an invasion of personal and property rights within the meaning of the federal and state constitutions Again, it was argued that there was a discrimination between the manufacturers and dealers in pillows and manufacturers and dealers in mattresses, comforters and quilts, especially after they had been used, as there was no provision made as to pillows, that, so far as this act was concerned, material made second hand in the same way as the material in mattresses might again be made into pillows and sold without any regulation whatever Under the decisions of this state this is class legislation But the provision in Section 3 of the act requiring that material used in remaking mattresses, quilts and comforters for the person's own use must be sterilized does not violate any constitutional prohibition, and is a proper exercise of the police power That same requirement could be made in an act with reference to the manufacture and sale of mattresses Regulations to prevent fraud and deceit in such manufacture and sale could be very readily provided, so as to protect the public, without prohibiting the use of second hand material if properly renovated and sterilized

A Waiver of Privilege

(Dewey vs Cohoes & L Bridge Co (N Y), 155 N Y Supp 887)

The Supreme Court of New York, Appellate Division, Third Department, reverses a judgment obtained by the plaintiff on account of a personal injury, and grants a new trial, because of what it holds was error in sustaining an objection to a hospital surgeon testifying for the defendant The court says that the plaintiff swore to the facts of the injury and his condition, and called physicians who had attended him who swore minutely as to his condition Some of them took, or assisted in taking, roentgenograms of the organs and parts of the body claimed to be injured The testimony of his physicians put before the jury, with great minuteness and circumstance, his physical condition, especially at the time when he was at the hospital The defendant called a surgeon, connected with the hospital, who had examined the plaintiff there at his request, and he was asked, "What did you find the man was suffering from?" Objection to the question was sustained, but the court thinks that the actual physical condition of the plaintiff while he was at the hospital was very material, and the defendant had the right to have the testimony of the surgeon on that subject The plaintiff put his person before the jury as a basis for damages, and had it described by his physicians, and thereby waived any privilege, not only of the physicians he called, but also of other physicians, who examined him about the same time It did not appear that the surgeon called by the defendant made his examination at the same time that the other physicians made theirs, but it does not seem that that fact was controlling The examination was at the same time the doctor was treating him for the same trouble It seems unfair that he could call certain of his physicians and refuse to permit others to testify, on the ground of professional privilege

Society Proceedings

COMING MEETINGS

American Medical Association, Detroit June 12 16

Alpha Omega Alpha Society Detroit June 12
American Academy of Medicine, Detroit, June 9 12
American Association of Anesthetists, Detroit June 12
American Proctologic Society, Detroit, June 12
American Therapeutic Society, Detroit June 9 10
Maine Medical Association Portland, June 7 8
Massachusetts Medical Society Boston June 6 7
Montana State Medical Association Miles City July 12 13
National Association for Study of Epilepsy Detroit June 10
New Jersey Medical Society Spring Lake, June 20-22
Washington State Medical Association Seattle July 12 14
Western Roentgen Society St Louis June 9 10

MEDICAL SOCIETY OF THE STATE OF NEW YORK

One Hundred and Tenth Annual Meeting held at Saratoga Springs May 16-18 1916

The President, Dr. W Stanton Gleason Newburgh, in the Chair

Examination of Eyes of Schoolchildren

Dr. F Park Lewis Buffalo In order that we may know how much importance to attach to defects of the eyes we must have exact data as to their incidence their character their corrigibility and their influence in retarding the normal progress of a large number of individuals Careful work has been done in Pennsylvania In the report of 1914-1915 in the fourth class districts, 269 199 pupils were inspected visual defects were found in 83 748 or 17 8 per cent , 5 512 pupils had other eye defects What disposition shall be made of such pupils in the classification and arrangement of the school? The methods employed in the correction of eye defects are not always well done when the work is done for a poor child the patient is usually referred either to a public dispensary or to an optician The refractive work done in public dispensaries is too frequently done in a hurried and careless way

Very few children beginning school life know how the eyes should be used and it was suggested by a committee chosen by the National Educational Association and later by a committee of women school principals in New York City that the child when he begins to use books be taught how they should be used and the following simple recommendations be printed on the first blank page of every schoolbook

1 Take care of your sight upon it depends much of your safety and success in life
2 Always hold your head up when you read
3 Hold your book 14 inches from your face
4 Be sure that the light is clear and good
5 Never read in the twilight in a moving car or in a reclining position.
6 Never read with the sun shining directly on the book
7 Never face the light in reading
8 Let the light come from behind you or over the left shoulder
9 Avoid books or papers printed indistinctly or in small type.
10 Rest your eyes frequently by looking away from the book
11 Cleanse the eyes night and morning with pure water
12 Never rub your eyes with your hands or an unclean towel handkerchief or cloth

Another reason why permanent records should be made of all schoolchildren s eyes is found in the workmen's compensation act. With the assumption of responsibility on the part of the employer for injuries received by the employee in the performance of his duties there must be an assurance of the existence of a normal physical condition on the part of the workman who is thus protected, but if there is an abnormal condition present this must be known in order that the extent of the injury may be ascertained If the examinations of the eyes of schoolchildren are standardized, and if these records are permanent and available, they would give us the important and necessary data concerning every individual in the state

Practical Experiences in Medical Inspections in Rural Sections

Dr William A Howe, Albany During the first year of the administration of the medical inspection law, many impressive and varied experiences have arisen Many grateful parents have written the department thanking it for the wonderful relief extended to their children Thousands of children have been placed on a higher plane of physical fitness, thus enabling them to make more normal progress in school Two children with congenital cataract, whose vision amounted to practically nothing, have been operated on successfully restored to vision, and placed in school, where satisfactory progress is now being made Three others had so little vision as to render regular school work impossible Two children of school age have recently been placed in the New York School for the Blind at Batavia, where they will receive an academic education, be taught some vocation and be made self-sustaining citizens Another child with a badly disabled foot following infantile paralysis has been successfully treated by tendon transplantation Two pupils, who were incorrigible, impertinent, backward and unmanageable in school improved promptly after the removal of septic tonsils and obstructing adenoids Several cases of tuberculosis have been found among our teachers while in one district this disease had existed among the pupils for nearly fourteen years Many pupils throughout the state in either the pretuberculous or incipient stage of the disease have been greatly benefited by sanitary or institutional treatment A few days ago one village district reported fifty cases of obstructed breathing among children of foreign parentage or from dependent families These will be referred to specialists who have generously designated free services to deserving children In another village certain schoolrooms are being utilized as a temporary hospital in which, under the supervision of an experienced nurse, physicians and surgeons are administering relief to local children In Schenectady, seven rural schools have united in the employment of a school nurse who is devoting her entire time to inspecting the children and to the improvement of school and home conditions This nurse though employed only for the past three months, has already accomplished such splendid results as fully to demonstrate the practical value of such services In another section of the state we find a rural teacher referring many of her children to specialists in Buffalo where physical defects have been relieved thus insuring to pupils far greater progress in school

The Neuropathic Child

Dr Edward B Angell, Rochester The best description of the neuropathic child is that given by Dr Francis Warner of London England who has examined 100 000 schoolchildren He describes the characteristic manifestations of the neuropathic condition, as headache difficulty in getting to sleep grinding of the teeth, delicate physical condition without actual disease, lack of appetite, and tendency to be fatigued easily These children are generally well made in body and have good heads, and they have well cut features and fine skin and usually light complexions There is a weakness and an overspontaneity There are uncontrolled movements without coordination Impressionability and imitativeness show that the child s mind is impressed by what it sees With growth development there is power to arrest the motor concept and to modify or even deny its inhibition Requiring the child to raise its arms and hold them straight out in front in a horizontal position is a test of the nervous condition and the degree of fatigue. If the latter are present the child does not hold both arms parallel, or drops one arm, or one hand, or in the very neurotic the knuckles of the hand are pointed directly backward Self-control cannot be established too thoroughly for the growing child since without self-control there is an unstable equilibrium which later gives rise to the vagaries of neurasthenia and hysteria If one studies the nervous child he will find that his position may be one of erectness of assurance or defiance or it may be dropping and self-conscious, or one of weariness, or fatigue the latter being more common in girls Another habit easily acquired by the nervous child is that of introspection, and this leads later to unstable equilibrium and self-consciousness to the detriment of efficient mental activity I have observed seventy-five or eighty cases of typical nervous children and have found that alcoholism and insanity have entered in as factors in about one third of the cases, while the arthritic diathesis was present in about 30 per cent In only one case did I find tuberculosis in the family, but tuberculosis probably played a more important part than this indicated in the transmission of an unstable nervous constitution In about 25 per cent of these cases the condition can be traced to abnormalities in pregnancy or delivery Faulty metabolism such as constipation, headaches mental depression, irritability and a poor circulation are characteristic evidences of disturbed nutrition There is defective nutrition in about two thirds of the cases, and nearly one third are the victims of night terrors Fresh air is a most important factor in the treatment of this type of child The Boy Scout movement is excellent in developing the correlation of muscular and physical activities and teaching the boy self-control and how to adjust himself to life

The Open Air School Child as a Type

Dr. Edward Durney, Buffalo Children of a certain type are being segregated and are regarded as unsuitable for treatment in fresh air schools They are the children who are living under the wrong conditions of life, who have a heredity of alcoholism or epilepsy, are the subjects of faulty nutrition and have abnormal nervous activities Some of these children are the spoiled children of the so-called better families The nervous conditions in these children range anywhere from chorea to partial recovery from infantile paralysis The defects brought out by present methods of school inspection must be corrected if the children are to receive the full benefit of the fresh air treatment. The attitude of the children themselves toward these schools is the best argument in their favor Records of the weight of these children have been kept, and the gain in weight that has been shown is a positive index of the improvement in their condition The change from the ordinary school to the fresh air school is frequently accompanied by an increased interest in both work and play There is often a mental deficiency accompanying the physical defects, and with the methods used in the open air schools these defects are sometimes benefited or removed Among the children who would be improved by the open air school may be included a large number of children in the ordinary school

The Effect of Malformations and Infection of the Oral Cavity of the Child on Its Future Health

Dr. Stephen Palmore, Poughkeepsie Nothing is so important as the hygiene of the mouth of boys and girls, for on that depends the health of the men and the women of tomorrow Malformations are of the utmost importance, and are so common that one rarely sees a normal conformation of the mouth and teeth This I attribute to the mixing of the races and the fact that not enough time has elapsed to evolve a definite type To the proper molding of the human face a full complement of teeth is requisite Where there is malformation there is malocclusion and the latter condition is the rule rather than the exception The anatomy of the mouth and teeth is such that the loss of one tooth ultimately disturbs the balance of the whole Therefore, one cause of dental deformity is the loss of one tooth Thumb, lip and tongue sucking are another cause of deformity, bringing about malocclusion and a narrowing of the palatal arch, and nasal obstruction It is important, therefore, for the rhinologist to work with the dental surgeon when it comes to the treatment of mouth deformities involving the palatal arch In the demonstration of alveolar abscesses, the Roentgen ray has been a great help Pyorrhea alveolaris is not a disease of childhood, but with proper prophylaxis and the correction of malocclusions it can be prevented A clean tooth never decays, teeth in good occlusion are easy to keep clean, and therefore teeth in good occlusion never decay

DISCUSSION

Dr John L Heffron, Syracuse Refraction work is being done in Buffalo by a volunteer staff of dispensary doctors This year the Department of Education of the city has undertaken to employ these doctors from the dispensary at a nominal salary as part time medical inspectors to care for the eyes of the schoolchildren These men have had a good training in the dispensary, and as a consequence the school board gets good service

Dr Moses Keschner, New York As a rule, the general practitioner gives the neuropathic child scant attention When the mother brings such a child to me complaining of night terrors, bed wetting and nervous symptoms, I usually prescribe bromids and Fowler's solution and let it go at that In this class of children one often has a greater problem to solve than in actual organic disease The many details of environment and economics must be taken into consideration These are the children that later fill the asylum, homes for epileptics and reformatories, and their treatment should be regarded as an important and serious problem

Dr B W Whitbeck, New York The records of the New York schools show that about 60 per cent of the children present a condition of weak foot or flatfoot I have inquired at Washington as to the disabling effects of flatfoot in the United States Army and Navy, and find that they are throwing out many candidates on account of this defect Children with this defect are often backward in school, are tired, and will not play or eat I saw a boy, who had been treated with tonics, sent to an oculist who prescribed glasses for the relief of headache but all without avail The boy finally went to the family physician who found that he had a hollow back and flat feet This boy was treated with proper orthopedic appliances, and in a short time his general condition improved and he took off his glasses It is not merely a question of whether the foot is flat but whether it is functionating It is not so much a question as to whether the feet are flat as whether they are weak Many persons have flat feet and yet go through life without symptoms It all depends on whether or not the foot functions

Dr Frank Overton, Patchogue I have been interested in the reference to cases in which private physicians failed to detect the defects of schoolchildren In my own town there is efficient cooperation between the private physicians and the school inspectors I understand that there are places where there is not this cooperation It is one of the functions of this society to bring about such cooperation

Dr Edward B Angell, Rochester We should call the attention of the general practitioner to these cases There are many conditions that I did not refer to in my paper, I did not refer to dementia praecox. It is sometimes very difficult to tell whether one is dealing with neurasthenia or dementia praecox I have had a case of dyspituitarism in a boy who presented feminine characteristics and an utter lack of any sense of responsibility In this case treatment with pituitary extract has brought about great improvement both physically and mentally Such cases show that something can be done by a careful study of these cases in youth The points brought out as to the relation between flatfoot and hollow back and their effect on the general health are very important Dr Warner, of London, to whom reference was made in my paper, states that he has found many cases of hollow back and has observed that it bears some relation to flatfoot, but he has not attempted to explain it

Dr Julius Schiller, Amsterdam Physicians know what should be done for these children, but they are unable to do it because they do not have the means The medical inspector knows the children in his schools who need glasses or need to have other defects corrected, but the parents do not have the means to have the work done They cannot do much until basic economic conditions in the home are improved

Dr A P Squire, Rotterdam Has any one tested for the Wassermann reaction in children having Hutchinson's teeth? What does this sign signify in schoolchildren?

Dr John L Heffron, Syracuse I feel that the sign known as Hutchinson's teeth is sometimes due to a delay in the eruption of the teeth I have not been able to discover that any one has made observations on this point

Dr William A. Howe, Albany The state department of health stands ready to make the Wassermann tests They have found a reasonable number of children with syphilis and have treated them in a successful manner

Dr B W Whitbeck, New York The examination of the teeth is very important In orthopedic work all patients with arthritis are examined by the Roentgen ray in order to ascertain the condition of the teeth When a focus of infection is found, the patient is put under treatment until this condition clears up

Dr L Duncan Bulkley, New York Nothing has been said as to the importance of thorough mastication Mothers should be instructed to teach children to chew their food properly Some device such as aluminum or celluloid balls or a cardboard cuff around the upper arm, would prevent the child from thumb sucking

(To be continued)

AMERICAN GYNECOLOGICAL SOCIETY

Forty First Annual Meeting held at Washington D C May 9 11 1916

The President, Dr. J Wesley Bovee, Washington, D C., in the Chair

SYMPOSIUM ON SYPHILIS IN ITS RELATION TO OBSTETRIC AND GYNECOLOGIC PRACTICE

Syphilis in Its Relation to Obstetrics

Dr. Edward P Davis Philadelphia Modern knowledge on this subject dates from the discovery of the *Spirochaeta pallida* in 1905-1906 as the cause of syphilis The discovery of the Wassermann reaction as a means of diagnosis, and salvarsan in treatment are also important factors Syphilis can be diagnosticated positively in a new-born infant by finding the spirochetes in the blood taken from the umbilical vein and from the tissues about the umbilicus and umbilical cord. Examination of the bodies of infants dying from syphilis soon after birth show the spirochetes abundantly present in the important viscera A woman apparently healthy giving birth to a syphilitic infant is herself syphilitic, although she may show no clinical signs or symptoms for years In these cases syphilis is conveyed from the ovum to the mother through the medium of the placenta The mother is said to have latent syphilis and can nurse her child without disturbance in her own health, and with positive benefit to the child She may, however at any time develop symptoms of secondary or tertiary syphilis The Wassermann reaction is unreliable as a positive test for syphilis in parturient women It may give a positive reaction in cases of severe toxemia and eclampsia when syphilis is absent, and in some other conditions in which the mother's health is seriously disturbed. In the lack of a more reliable means of diagnosis, the Wassermann test should invariably be made in selecting wetnurses and in all suspicious cases

Syphilis in the acute stage attacking a pregnant woman can often be checked promptly by the use of salvarsan While the germs destroying syphilis may be destroyed, the toxins which they produce will usually cause death of the fetus If syphilis occurs early in pregnancy, the best results for the mother and child are procured by mercurial treatment and potassium iodid While skin lesions are present, hypodermic or intravenous injections of mercurial solutions are useful In treating active syphilis in the new-born, salvarsan has been given in the cubital vein with good results When salvarsan is used with the mother and child the urine should be examined repeatedly to determine the presence or absence of arsenic and the presence or absence of signs of irritation of the kidneys Should traces of arsenic disappear from the urine, arsenic poisoning may be feared Syphilis in parturient women greatly increases the mortality and morbidity for the mother on account of mixed infection and lesions of the genital organs Unless promptly detected and treated it is one of the most important causes of fetal death No syphilitic man or woman should be allowed to marry unless he or she has been under observation for six years after the last appearance of symptoms of syphilis.

Syphilis in Relation to Some Social Problems

Dr Sigmund Pollitzer, New York The fact that syphilis can be transmitted from the syphilitic mother to her unborn child was recognized 400 years ago, but the fact that syphilitic children are born of apparently healthy mothers leads to the conclusion that syphilis may be transmitted to the offspring by way of the semen of the father without infecting the mother In fact, paternal syphilis is regarded as the most frequent form in syphilitic heredity More extended and clinical observation, the discovery of the spirochete on the maternal aspect of the placenta, and the results of the Wassermann test have completely changed our views in this respect The transmission of spirochetes to the ovum may be regarded as a physical impossibility, a spirochete is three times as long as the diameter of a spermatozoid head, and, furthermore an infected ovum will not develop into a fetus Colles' and Profeta's laws are true only in the sense that the mother of a syphilitic child and the child of a syphilitic mother already have syphilis, and therefore apparently cannot acquire it The apparently healthy mothers of syphilitic children invariably have a positive Wassermann reaction and generally present symptoms of syphilis if we follow them long enough A Wassermann test should be made in every case of unexplained abortion

A syphilitic man may marry if he has received three years of treatment and has remained free from symptoms for another year or two Millions of happy marriages prove the wisdom of the rule, but the thousands that result in infection of the wives and birth of syphilitic children prove its inadequacy The attempt to control the incidence of syphilis by segregation has proved of slight value, and, moreover, in Anglo-Saxon countries has encountered too much prejudice to permit of its enforcement The control of syphilis must come through education of the public in the risks and dangers of illicit intercourse, and education of the physician in the importance of early diagnosis and proper treatment I cannot refrain from contrasting the generous provision made for the care of the syphilitic in the hospitals of European cities with the attitude of our American hospitals, in most of which the patient with an active syphilis is refused admission

Syphilis of the Internal Genital Organs in the Female

Dr. George Gellhorn and Dr. Hugo Ehrenfest, St. Louis Syphilis is common enough in women to constitute a gynecologic problem in the widest sense Not every disease in a syphilitic woman is syphilitic in nature, but syphilis, if present, will exert an influence of its own on coexisting diseases Latent syphilis prevails more in women than in men The course of syphilis in men differs in many points from that in women To instance but one of the differences the relative frequency of tabes and paresis in the two sexes is well known Primary chancres of the vagina are rare, probably because of certain histologic and biologic characteristics of the vagina Tertiary manifestations of the vagina are also extremely rare They represent, as a rule, the continuation of secondary lesions in the vulva, uterus or adjoining organs The isolated submucous gumma breaks down early and appears in the form of a more or less characteristic ulcer The more destructive processes which eventually lead to the formation of fistulas and strictures almost always originate in structures surrounding the vagina Tertiary lesions of the vagina do not exhibit characteristic symptoms, such as pain or discharge

The primary chancre of the cervix represents the best known and most common type of the syphilitic affections of the female internal genitalia Its frequency has probably been overestimated Statistics based on a large number of observations have never shown a frequency over 1 5 per cent of all primary chancres found on the genitalia Syphilis manifests itself on the cervix in the form of macules, papules and ulcerations These forms probably represent three successive stages in the development of a lesion caused by scattered accumulations of the spirochete in the squamous mucosa of the cervix The parasite can readily be recovered from the secretion of any of the three forms and this explains the great infectiousness of secondary lesions The Wassermann reaction is positive in this stage

Syphilis of the pelvic cellular tissue appears in the form of a diffuse gummatous infiltration which secondarily involves the pelvic peritoneum In almost all instances a diagnosis of malignancy has been made In our case the positive outcome of the Wassermann reaction, together with other unmistakable signs of tertiary syphilis about the outer genitals, aided in arriving at a correct diagnosis Specific treatment produced amazingly quick improvement of an apparently hopeless condition

Occurrence of Syphilis in the University of Michigan Obstetric and Gynecologic Clinic

Dr Reuben Peterson, Ann Arbor, Mich , Out of 2,000 inpatients in the University Hospital, the proportion of syphilitics is 6 per cent The percentage of syphilis in 381 cases in the university maternity was 4 7 In eighteen cases of syphilis among the number examined, only eight, or less than half, gave a history of syphilis In only the same number (eight) were there positive physical signs of syphilis As shown by the histories of the eighteen cases, there was a greater chance for the syphilitic mother treated by salvarsan and mercury to give birth to a living full term child than when no treatment was given during pregnancy The new-born infants of the mothers so treated did not give positive Wassermann reactions, although undoubtedly they were syphilitic and later would probably show signs of the disease A certain proportion of the new-born children of untreated syphilitic mothers will give positive Wassermanns Out of 390 gynecologic patients subjected to the Wassermann test, twenty, or 5 6 per cent gave positive reactions In only five of the twenty-two syphilitic patients was there a history of syphilis

Relationship of Syphilis to Miscarriage and Fetal Abnormalities

Dr F L Adair, Minneapolis Among 1,095 obstetric cases there ewere 2 422 full term pregnancies, 197 abortions 62 miscarriages, 84 premature births, and 8 unclassified cases There were 76 still-births and 16 fetal malformations These cases were studied for evidences of syphilis by the Wassermann reaction, and clinical and necropsy evidence In those cases giving a history of abortion there were 621 pregnancies in 109 cases There were 197 abortions in these cases, or approximately one to every three pregnancies There were 13 syphilitic cases in which there were 74 pregnancies with 23 abortions, or approximately 1 3 In 83 cases without evidence of syphilis there were 464 pregnancies, and 142 abortions, or about 1 to 3 Apparently pregnancy does not end much more frequently during the first three months in those affected with syphilis than in those who are free from the disease Forty patients had 62 miscarriages in 202 pregnancies, or approximately 1 3 Seven patients with syphilis had 10 miscarriages in 27 pregnancies, or about 1 3 Thirty patients without syphilis had 49 miscarriages in 161 pregnancies, or approximately 1 3 There were 68 cases with 84 premature births in 241 pregnancies, or 1 3 There was evidence of syphilis in about one third of these mothers Congenital syphilis appeared in 5 of 50 infants born in the hospital Of the 50 who were stillborn, syphilis was demonstrated in 4 This means that 9 of 50 premature infants were proved syphilitic There were 64 mothers who had 76 stillbirths The Wassermann reaction was positive in about one tenth of these cases Four of 34 infants born in the hospital were proved to be syphilitic, or about 1 8 Two of 15 deformed infants were born to syphilitic mothers There was evidence of syphilis in 2 of 11 cases of hydramnios Two of 5 cases of hemorrhage of the new-born were apparently due to syphilis

How Closely do the Wassermann Reaction and the Placental Histology Agree in the Diagnosis of Syphilis?

Dr J Morris Slemons, New Haven, Conn The Wassermann reaction in the mother's blood and the microscopic examination of the placenta were carried out in 360 consecutive confinements There was absolute agreement between the serologic test and the result of study of the chorionic villi in 345 cases, or 95 per cent Occasionally the placental findings are more reliable than the Wassermann Then, again, the Wassermann may be more accurate than the placenta, and this is most likely to be true in postconceptional syphilis Accurate diagnosis of syphilis in obstetric patients requires both the Wassermann reaction and the study of the placenta The freshly teased chorionic villi should be examined as a routine If their appearance raises suspicion of syphilis, hardened and stained sections of the placenta must be studied and the Wassermann reaction in the mother's blood must be determined Irrespective of the teased villi, both these observations should be made whenever the fetus is premature, macerated or stillborn

Experimental Syphilis

Dr F W Baeslack, Detroit Attempts at immunization by means of *Spirochaeta pallida* vaccines were made and the occurrence of agglutinins in the serum of animals treated with suspensions of dead spirochetes was noted The absence of immunity was demonstrated by the ability to reinoculate animals which had recovered spontaneously or subsequent to treatment An altered reactivity of the body is the possible explanation for the occurrence of the lesions peculiar to the various stages of syphilis

Syphilitic Fever

Dr Frederick J Taussig, St Louis The rare mention of this symptom in gynecologic literature is out of proportion to the comparative frequency of its appearance A positive diagnosis of syphilitic fever can be made only rarely, but the diagnosis can be made with great probability in certain groups of cases Syphilitic fever may be divided into 1 Secondary syphilitic fever occurring at the outbreak of the eruption, lasting usually only three to four days with a rise of temperature of 99 3 or 100 F Fournier estimates that the symptom occurs in 20 per cent of all syphilitics 2 Late secondary syphilitic fever may complicate pregnancy or gynecologic conditions, it is usually prolonged with a higher degree of temperature In these cases the diagnosis is based on the positive history and evidence of a syphilitic infection, the exclusion of other febrile diseases, and the immediate and permanent result of antisyphilitic treatment 3 Tertiary syphilitic fever is of greater diagnostic importance than the two previous groups because the symptoms and history of syphilis are often absent and only the four plus Wassermann points the way to an interpretation of the continuous fever The cause of syphilitic fever is, in all likelihood, to be found in the entrance of spirochete toxins, in addition to the organisms themselves, into the circulation Probably individual predisposition is also an important factor in the rise of temperature That fever occurs occasionally after injections of mercury or salvarsan, when it may be fairly assumed that large quantities of endotoxins are liberated from the dead spirochete, is additional confirmation of the toxic interpretation of syphilitic fever

(To be continued)

Campaign Against Degenerative Diseases of Adult Life— The April number of the *Monthly Bulletin* of the department of health of New York City contains interesting statistics with reference to the mortality from chronic disease of the heart, kidneys and arteries and a careful analysis of their significance by Dr Charles F Bolduan, director of the Bureau of Public Health Education These form the basis for a plan of education for the control of this class of diseases This plan includes the devices that have been employed in campaigns directed against tuberculosis and infant mortality It would also include a large exhibition of adult hygiene on the lines of the exhibition held in Dresden three years ago, the key of the exhibition being prevention, early recognition and competent medical care In connection with this plan the department of health announces that it is prepared to undertake a sanitary survey of any industry, trade or group of manufacturing or mercantile establishments with a view of appraising existing conditions and in order to show employers and workers alike what can be accomplished through a system of voluntary hygienic and sanitary control

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below

American Journal of Physiology, Baltimore

May XL No 3 pp 373 501

1 Falling Reflex of Cats H R Muller and L. H Weed Baltimore
2 Circulation of Blood in Man at High Altitudes. Effects of Physical Exertion on Pulse Rate, Arterial and Venous Pressures - E C Schneider C E Cheley and D L. Sisco Colorado Springs, Colo
3 *Appearance of Sugar in Secretions of Digestive Tract Following Administration of Phlorhizin R. G Pearce, Chicago
4 *Destruction of Hormones Proenzymes and Enzymes by Ultraviolet Radiation W E Burge, W R Fischer and A J Neill, Urbana Ill.
5 Excitation of Phrenic Nerve by Action Current of Heart. F H Pike, New York.
6 *Character of Innervation of Kidney R. Burton Opitz New York
7 Some of General Physiologic Properties of Diaphragm Muscle as Compared With Certain Other Mammalian Muscles F S Lee A. E Guenther and H E Meleney New York
8 *Some Chemical Properties of Certain Mammalian Muscles F S Lee E. L. Scott and W P Colvin New York.
9 Action of Temperature and Humidity on Working Power of Muscles and on Sugar of Blood F S Lee and E. L. Scott, New York.

2 **Circulation of Blood at High Altitudes**—The observations recorded in this paper were made on Pike's Peak Briefly, Schneider s study shows that by the first morning spent at the high altitude the pulse rate had accelerated in the group that ascended by train and remained well to from 4 5 to 15 6 per cent., in the mountain sick group to from 22 4 to 46 6 per cent and for those who walked up to from 26 to 66 per cent The mean pulse rate showed the same group differences while the variations throughout the day were the same for each The frequency of the heart beat due to changes in posture was not materially different at the two altitudes The observations on the after effects of walks for fifteen minutes at the rate of three and four miles per hour and of a short rapid run show that physical exertion accelerated the heart rate more at the high than at a low altitude, and that the altitude influence was disproportionately increased as the amount of work was increased For moderate exertion the effects were greater during the first days of residence After a time the three-mile walk did not call forth the altitude acceleration, but it persisted after the four-mile walk even after two weeks of residence The time required for the heart rate to return to normal was also prolonged during the first days but was reduced with acclimatization The short rapid runs were exhausting at the high altitude, the heart was accelerated on an average of 120 beats per minute and the rate remained high for several hours thereafter During work on a stationary bicycle at the high altitude the heart rate increased to the maximum in the primary rise, while at the low altitude the maximum came later, in the secondary rise

Arterial pressures were higher after a given form of work at the high than at the low altitude The influence of lowered barometric pressure was the more pronounced the more vigorous the exertion The reaction was most conspicuous during the first days of residence but while lessened by acclimatization it did not wholly disappear after a residence of two weeks The average rise in the systolic pressure after a short quick run was 61 mm., while the average pressure for each of three men was 177, 195 and 197 mm Hg These high pressures were similar to those caused by a maximum lift of weights The delay in the return to normal was as prolonged as after exhaustive exercises During work the arterial pressures rose more rapidly at the high than at a low altitude the rate of rise was not as rapid as that of the pulse rate. Ordinarily at the low altitude the arterial pressure reaches its maximum before the pulse rate, but at the high altitude the pulse rate first comes to the maximum. Physical work caused in five out of seven subjects a greater rise in the venous pressure at the high than at the low altitude The maximum however, was on the average less than at the low altitude because of the fact that the normal venous pressure was lower on Pike's Peak The exertion of walking up the Peak is exhausting and puts a serious strain on the heart

3 **Effect of Phlorhizin on Digestive Secretions**—The reducing power of the pancreatic, gastric and salivary secretions in normal and phlorhizinized dogs was investigated by Pearce and he found that they do not contain an appreciable amount of reducing substance The pancreatic and gastric juices and sometimes the salivary juice of dogs rendered glycosuric by phlorhizin, contain a reducing substance In the case of the pancreatic juice, this is dextrose

4 **Action of Ultraviolet Radiation on Enzymes, Etc**—According to Faraday's law the amount of silver deposited on the cathode, when an electric current is passed through a solution of silver salt, is proportional to the amount of current passed that is, to the energy applied It has been shown that this same relation exists between the amount of current passed and the destruction of enzymes In view of these facts it would seem that the relation between the decrease in enzyme activity and exposure to ultraviolet radiation should be linear The experiments reported by Burge, Fischer and Neill were carried out to see if this was true They tested epinephrin secretion and cholagogues, trypsin, trypsinogen pepsin, ptyalin, amylopsin and enterokinase The rate of destruction was found to be proportional to the amount of energy applied, except that the cholagogic activity of bile was not affected by exposure to ultraviolet radiation

6 **Innervation of Kidney**—The experiments cited by Burton-Opitz confirm his previous contention that the innervation of the kidneys is unilateral and enable him to explain the peculiar changes in the blood supply of these organs which he obtained on contralateral stimulation of the splanchnic nerves The initial increase in the flow is attributed correctly to the rise in the general blood pressure, because as the kidney on the opposite side is not directly affected by the stimulation, its vascularity must be subject to the changes in the arterial driving force The subsequent decrease in the blood supply is caused by the secondary constriction of the renal blood vessels by the epinephrin

8 **Chemical Properties of Certain Mammalian Muscles**—This paper contains the results of a determination of the chemical elements other than carbon, hydrogen and oxygen and of the glycogen occurring in four muscles of the cat, namely the diaphragm the extensor longus digitorum, the sartorius and the soleus, together with an endeavor to correlate those results with certain of the physiologic properties of the same muscles The authors found that the quantity of lipin sulphur and of water-soluble sulphur is least in the diaphragm, greatest in the soleus, and intermediate in the extensor and the sartorius, that is, the quantity of nonprotein sulphur varies inversely to the order in which most of the general physiologic properties of the muscles are expressed The ratios betwen the lipin sulphur and the lipin phosphorus and between the water-soluble sulphur and the water-soluble phosphorus vary directly as most of the general physiologic properties of the muscles The protein sulphur varies directly as most of the general physiologic properties of the muscles, and is possibly to be correlated with muscular respiration The glycogen content is greatest in the diaphragm, least in the soleus, and intermediate in the extensor and the sartorius It thus varies directly as most of the general physiologic properties of the muscles and is to be especially correlated with their reducing power and their working power For each muscle there seems to be a specific ratio between the potassium and the sodium

Boston Medical and Surgical Journal

May 18 CLXXIV No 20 pp 703 738

10 How Massachusetts Provides for Its Mentally Ill L. V Briggs Boston.
11 Hallux Rigidus Report of Cases. C F Painter Boston
12 Use of Duodenal Tube for Diagnosis and Treatment. (Concluded.) F W White Boston
13 Chronic Inversion of Uterus Report of Cases J C. Hubbard Boston
14 Case of Pregnancy and Labor Following Resection of Ovary F W Johnson Boston

Bulletin of Johns Hopkins Hospital, Baltimore

May XXVII, No 303, pp 121 156

15 *Nitrogen Metabolism During Pregnancy K. M Wilson, Baltimore
16 *Functional Significance of Mitochondria in Toxic Thyroid Adenomas E Goetsch, Baltimore
17 *Renal Diabetes, Report of Case D S Lewis and H O Mosenthal, Baltimore
18 Bilateral and Complete Trigeminal Paralysis Without Involvement of Other Cranial Nerves C M Byrnes, Baltimore.
19 Digestion, Historical Survey R J Cary, Lake View, Wash

15 **Nitrogen Metabolism During Pregnancy**—Observations were made by Wilson on the nitrogen metabolism in three normal pregnancies, in one patient for a period of four weeks, from the tenth to the fourteenth weeks of the pregnancy The other two patients were studied for the last 133 and 101 days of their respective pregnancies and also for a short time in the puerperal period A fairly liberal diet was allowed, both in quantity and character of foodstuffs used The urine was collected for twenty-four hour periods, and carefully preserved, of these specimens daily analyses were made The feces were preserved and analyzed weekly Wilson found that in the perfectly normal pregnant woman, storage of nitrogen begins at a much earlier period than has hitherto been supposed, possibly the organism may acquire the capacity for storing nitrogen from the very beginning of the pregnancy In the early months this storage is far in excess of the actual needs of the developing ovum, and the excess must be added to the general maternal organism Storage of nitrogen continues throughout the entire duration of pregnancy, being most marked during the last few weeks, when the fetal needs are at a maximum The nitrogen stored is greatly in excess of the actual needs of the developing ovum, so that, apart from the amount needed for the hypertrophy and development of the genitalia and breasts, a large proportion of the nitrogen stored is added to the general maternal organism as "rest material," though, concerning the form in which the reserve is stored, the author is unable to make any positive statement The nitrogen capital of the maternal organism is thus increased, though the reserve supply may possibly be entirely exhausted during the puerperium and period of lactation

In the healthy woman, who goes through a normal pregnancy, the period of gestation does not necessarily represent a "sacrifice of the individual for the sake of the species," but may actually be a period of gain There is a relative increase in the percentage of urinary nitrogen excreted in the form of free amino-acids, though not necessarily an absolute increase in this form of nitrogen There is also a tendency for the precentage of ammonia nitrogen to become increased during the last weeks of pregnancy, although at other times during the pregnancy there is practically no variation from the percentages noted in nonpregnant individuals on a similar diet

16 **Significance of Mitochondria in Toxic Thyroid Adenomas**—Attention is directed by Goetsch to the determination of glandular function, especially in a gland presenting so many variations in its pathologic anatomy as the thyroid gland He feels that in the study of the pathologic anatomy of the thyroid gland, the mitochondria will prove to be a better index of the thyroid activity than the histologic criteria heretofore applied Since the mitochondria occur normally in the thyroid cell, and since they are present in greatly increased numbers in the adenomas associated with symptoms of hyperthyroidism, it would seem probable that they are correlated with an overproduction of an otherwise normal secretion produced by the thyroid cell It is interesting that exophthalmos is so rarely, if ever, associated with thyroid adenomas Goetsch suggests that perhaps there is a very different form of intoxication in the true Basedow's disease In the latter the thyroid gland, just as in the case of the toxic adenomas, shows a marked increase in mitochondria over the normal There are, however, several differences in these two conditions in the number, morphology, size and distribution of the mitochondria, a description of which is promised in a later report

17 **Renal Diabetes**—The patient whose case is cited by Lewis and Mosenthal showed glycosuria, but none of the other abnormalities characteristic of an impaired carbohydrate metabolism A slightly diminished phenolsulphonephthalein excretion, the slight elevation of Ambard's constant above the normal, as well as the glycosuria, point to a depressed kidney function The absence of any further subjective or objective signs, past or present, leads the authors to the conclusion that a renal glycosuria is an interesting anomaly, but of no importance to the organism as a whole

Colorado Medicine, Denver

May XIII No 5 pp 135 166

20 Some Points in Eye Diseases for General Practitioner F E Wallace, Pueblo
21 Few of Many Lessons in Medicine and Surgery Taught by Present European War C Powell, Denver
22 Silent Features of Tuberculosis of Kidney O Lyons, Denver
23 *Rest of Individual Lung by Posture G B Webb, A M Forster and F M Houck, Colorado Springs
24 Osteo Arthritis H W Wilcox, Denver
25 Mortality in Abdominal Surgery E C Rich, Ogden, Utah
26 Effects of Drying on Viability of Germs J M Shapiro, Denver

23 **Rest of Lung by Posture**—The authors suggest to attempt to train tuberculosis patients to rest at night and during day time on the more afflicted side, and in addition to place a small firm pillow under this side to restrain to a greater degree its motion The application of the principle suggested would seem to have been efficacious in many patients for a year past in reducing the amount of sputum promoting healing, hindering relapses and diminishing fever

Illinois Medical Journal, Chicago

May, XXIX No 5, pp 321-400

27 Criminal Boy Observations Based on One Hundred and Twelve Cases W O Krohn, Chicago
28 Ultraviolet Rays in Dermatology E A Fischkin, Chicago
29 Importance of Examination of Larynx in General Practice N Schoolman, Chicago
30 Resume on Foreign Bodies in Stomach, Report of Case G C Amerson, Chicago
31 Treatment of Nervous Diseases. J Grinker, Chicago
32 Neurasthenia A S Hershfield, Chicago
33 Meniere's Disease, Report of Case O Tydings, Chicago
34 Advantages of Scientific Feeding in Certain Nervous States A R Satterlee, Danville
35 Bacteriology of Pneumonia A A Day, Chicago
36 Indications for Removal of Tonsils. F J Lesemann, Chicago
37 Diagnosis and Elimination of Chronic Focal Infections Associated With Teeth W H G Logan, Chicago
38 Some Common Errors in Practice of Obstetrics. H M Stowe Chicago
39 Prognosis of Nuclear Units. H H Seyl, Chicago
40 Cases of Trichinosis With Remarks on Diagnosis L. Bloch, Chicago
41 Acute Otitis Media R H Good, Chicago

Journal of Bacteriology, Baltimore

January I, No 1 pp 1 134

42 Genesis of New Science — Bacteriology W T Sedgwick
43 Pedagogics of Bacteriology D H Bergey, Philadelphia.
44 Studies on Bacterial Nutrition, Utilization of Proteid and Nonproteid Nitrogen L F Rettger, N Berman and W S Sturges, New Haven, Conn
45 Studies on Soil Protozoa and Their Relation to Bacterial Flora J M Sherman, Madison, Wis
46 *Culture Medium for Maintaining Stock Cultures of Meningococcus. C G A. Roos, Glenolden, Pa
47 *Bile Compared With Lactose Bouillon for Determining Presence of B Coli in Water M M Obst, Washington, D C

46 ***Stock Cultures of Meningococcus***—*The culture medium devised by Roos is a modification of the potato blood agar used by Bordet and Gengou for the isolation of B pertussis It permits of relatively slow growth of the meningococcus with apparent suppression of ferment formation, thus resulting in greater viability Preparation of medium 1 Prepare potato extract as follows (a) Potato peeled, cut in small pieces and washed in running water for about two hours, 100 gm (b) Water containing 4 per cent double distilled glycerin free from acid, 200 c c (c) Mix and autoclave for forty minutes (d) Allow to stand over night and strain through cheese cloth 2 Make potato extract agar as follows (a) Mix in an Erlenmeyer flask, potato extract, 50 c c ,*

sodium chlorid solution 0 65 per cent, 150 c c, agar 5 gm (b) Heat in Arnold sterilizer until agar is melted, requiring from thirty minutes to one hour 3 Tube without filtering, and sterilize, in autoclave for about forty minutes 4 When wanted for use, melt the agar, cool to about 45 C and add the desired amount of sterile defibrinated horse blood. The amount of blood to be added depends on whether or not the meningococcus has become accustomed to the medium

47 **Bile Compared with Lactose Bouillon**—Lactose bouillon used by Obst as a substitute for lactose peptone ox-bile permitted the development of about twice as many *B coli* from water as the bile medium Lactose bouillon costs less in money and labor The difficulty of obtaining pure, fresh bile puts it almost out of the reach of many workers The stored bile is proved to show progressive deterioration Lactose bouillon can be prepared when desired and can be made more uniform It need contain no precipitate to clog the inner tube or to affect the activity of the organism

Journal of Biological Chemistry, Baltimore

May, XXV No 1 pp 1 175

48 *Amino-Acid Minimum for Maintenance and Growth T B Osborne and L. B Mendel, New Haven Conn
49 *Synthesis of Hippuric Acid in Animal Organism Excretion of Uric Acid After Ingestion of Sodium Benzoate H B Lewis and W G Karr Urbana Ill
50 Studies in Blood Relationship of Animals as Displayed in Compositions of Serum Proteins. Percentage of Nonproteins in Serums of Certain Animals and Birds. R. M Jewett Berkeley Calif
51 Toxic Action of Soluble Aluminium Salts on Growth of Rice Plant K. Miyake Berkeley Calif
52 Solubility Data for Various Salts of Lauric Myristic, Palmitic and Stearic Acids C A Jacobson and A Holmes Reno Nev
53 Separation of Lauric and Myristic Acids From Each Other and From Mixtures of Other Fatty Acids C A. Jacobson and A. Holmes Reno Nev
54 Changes in H Plus and OH Minus Concentration Which Take Place in Formation of Certain Protein Compounds C L. A Schmidt *Berkeley Calif*
55 Fate of Normal A Aminocaproic Acid in Phlorhizinized Dog I Greenwald New York.
56 Admissibility of Ammonium Magnesium Phosphate as Form in Which to Weigh Phosphoric Acid. W Jones Baltimore.
57 Hydrolysis of Yeast Nucleic Acid With Ammonia W Jones and H C Germann Baltimore
58 Hydrolysis of Yeast Nucleic Acid in Autoclave. P A. Levene and W A. Jacobs New York
59 *Nature of Dietary Deficiencies of Wheat Embryo E V McCollum N Simmonds and W Pitz Madison Wis.
60 *Separation of Autogenous and Added Hydrocyanic Acid From Certain Plant Tissues and Its Disappearance During Maceration C L. Alsberg and O F Black Washington D C
61 Cyanogenesis in Plants. Studies on Tridens Flavus (Tall Red Top) A Viehoever C. O Johns and C L. Alsberg Washington D C
62 *Effect of Surgical Procedures on Blood Sugar Content. A A. Epstein and P W Aschner New York.
63 Formation of Specific *Proteoclastic Ferments* in Response to Parenteral Injection of Foreign Proteins. F Hulton Philadelphia
64 Limit of Assimilation of Glucose. A. E. Taylor and F Hulton Philadelphia.

48 **Amino-Acid Minimum for Growth**—Additional experiments are reported by Osborne and Mendel to show the part played by tryptophan and lysin in the metabolism of maintenance and growth The quantity of these amino-acids available in the diet can be made the limiting factors which determine the nutritive equilibrium and possibilities for increment of size in an individual. They afford an important illustration of the "law of minimum' applied to essential nitrogenous components of the food supply

49, **Excretion of Uric Acid After Ingestion of Sodium Benzoate**—Coincident with the maximal elimination of the ingested benzoate during the first four hours after administration, the uric acid excretion was markedly diminished, a decrease of 50 to 70 per cent. as compared with the excretion during the corresponding periods of the fore and after days No significant changes in the elimination of creatinin or uric acid resulted from the administration of large doses of sodium hippurate The decreased uric acid excretion observed after benzoate ingestion would seem to be due to the effect of the benzoic acid itself and not to its conjugated, nontoxic derivative hippuric acid There was a slower elimination of the hippuric acid after the administration of sodium hippurate, than after benzoate administration.

59 **Dietary Deficiencies of Wheat Embryo**—The experiments reported in this paper reveal the fact that the wheat embryo contains qualitatively all the factors essential for the promotion of growth and well-being in an animal, but these are not so proportioned that it can serve as a satisfactory diet without several modifications The mineral content must be modified in certain respects before growth can proceed at all The character of the proteins is excellent, no other proteins from plant sources which the authors have studied are superior to them Rations containing but 10 per cent of these proteins are wholly adequate for growth at the maximum rate Both the fat soluble A and the water soluble B, the factors which must be supplied by an adequate diet, but whose chemical natures are as yet unknown, are present, the first in moderate concentration, the second, in very high concentration as measured by the needs of the growing animal Two per cent. of wheat embryo supplies enough of the water soluble B to promote growth at the normal rate for several months There is contained in the wheat germ a substance which is distinctly toxic to animals This is in great measure removed by extraction with ether, and is found in the fat fraction The authors have not yet determined whether the toxicity is due to peculiarities in the chemical nature of the fats themselves or to something which is associated with the fats

60 **Hydrocyanic Acid in Plant Tissues**—Alsberg and Black show that the leaves of *Prunus virginiana* must be distilled with acid four hours before all of the hydrocyanic acid is liberated whereas in Andropogon and Panicularia less than one hour is sufficient to liberate all hydrocyanic acid present It is further shown that in macerating plant tissues that contain hydrocyanic acid a certain amount of the hydrocyanic acid present or of cyanid that may be added is so converted that it is not recoverable by distillation with sulphuric acid This is not due to the action of enzymes or to the presence of glucose It is here shown that in determining hydrocyanic acid in plants several methods in corroboration of each other must be used

62 **Effect of Surgical Procedures on Blood Sugar Content.**—Seventy-seven cases were studied by Epstein and Aschner In twelve cases in which they observed a hyperglycemia before anesthesia (a sugar content above 0 11 per cent) it was evident from further examinations that the high sugar content was due to various associated factors, and not to any psychic disturbances These were of the nature of obesity nephritis, hypertension, fever and loss of blood as in menorrhagic conditions, in which a hyperglycemia is believed to be encountered frequently That the hyperglycemia in these cases was due not to psychic factors was further evidenced by the subsequent determination of the blood of these patients, which showed that the hyperglycemia was persistent in many of them Only four patients operated on under local anesthesia were examined, and from the results obtained it appears that not only was there no resultant hyperglycemia, but that a slight diminution in the blood sugar content takes place Sixty patients operated on under general anesthesia were examined In fifty-seven of the sixty cases there was a well marked increase in the blood sugar content after anesthesia and operation In one case there was a rise of only 0 001 per cent within the limit of error In another case there was a decrease of 0 004 per cent. in a third a decrease of 0 006 per cent The average results in all kinds of cases, regardless of duration, showed a decided increase after operation, and the persistence of a moderate increase twenty-four hours later There was no difference between the effect of intraperitoneal operations and extraperitoneal operations on the sugar content of the blood The anesthesia played the important role in the production of the hyperglycemia observed The more marked increases in blood sugar content appeared when the anesthesia lasted one hour or more. The operation of nephrectomy had an especially marked effect in the blood sugar content and the operation of itself was responsible for a good part of the

hyperglycemia, over and above the effect of the prolonged anesthesia Postoperative glycosuria was found in only one of fifty cases in which the postoperative urine was examined for sugar with Fehling's reagent This was a plastic operation lasting fifty-five minutes

Kentucky Medical Journal, Bowling Green

May, XIV, No 5, pp 235 290

65 Medical and Surgical Treatment of Tuberculosis E Morris, Oak Forest, Ill
66 Purity in Life and Language of Physician J W Crenshaw, Cadiz
67 Hemophilia, Report of Case H M Rubel, Louisville
68 Care and Comfort of Surgical Patient A C L Percefull, Louisville
69 Backache S P Garrison, Bellevue
70 What the Physician Owes Public W J Gerding, Newport
71 Commoner Diseases of Kidney W J Gerding, Newport
72 Medical Inspections of Schools E A North, Newport
73 Urinalysis in Life Insurance L T Eckler, Falmouth
74 Headache as Diagnostic Symptom F R Burton, Chenoa
75 Acute Rhinitis J F Adams, Bagdad
76 Eye Strain J P Edwards, Middlesboro
77 Acute Articular Rheumatism in Children A S Brady, Greenup
78 Condition for Which Hippocrates Bled W W Morton, Bluefield
79 Acute Septic Peritonitis J H Caldwell, Cincinnati

Laryngoscope, St Louis

April, XXVI No 4, pp 217 368

80 Index Medicus and Digest of Otolaryngology for 1915

Medical Record, New York

May 20 LXXXIX, No 21, pp 895 940

81 Some Mechanical Factors in Colonic Stasis C H Peck, New York
82 *Golfer's Foot C Cross, San Francisco
83 Review of One Hundred and Thirty Two Consecutive Operations for Fibroid Tumors of Uterus E G Jones and D F Winn, Atlanta, Ga
84 Two Cases of Syphilis of Lung S Bruch, New York
85 Diet in Diabetes Mellitus as Modified by Considerations of Nitrogenous Metabolism E E Cornwall, Brooklyn
86 Salt Water Ear (Infection Due to Sea Bathing) H B Blackwell, New York

82 **Golfer's Foot.**—Golfer's foot is a term applied by Cross to an acute condition of the foot due to distortion as a result of broken arch in the anterior metatarsal curved area

Military Surgeon, Washington, D C

May XXXVIII, No 5, pp 483 600

87 Etiology of Typhus and Louse Extermination, From Viewpoint of Sanitarian H G Beyer, U S Navy
88 Instruction of Enlisted Sanitary Personnel of Organized Militia C W Comfort, Jr, Conn N G
89 Experiences in German Reserve Hospital Under Auspices of American Red Cross E A Hamilton, Ohio N G
90 Organization and Problems of War Hospital J M Flint
91 American Surgeons Under Fire J S Schmitt
92 Epidemic of Dysentery at Fort Shafter, Hawaii, Three Cases of Hiss Russell or "Y" Bacillus Infection G M Van Poole, U S Army
93 Epidemic of Bacillary Dysentery Due to Hiss Russell Bacillus M A Delaney, U S Army
94 Bacillary Dysentery, Recent Epidemic at Fort Shafter, Hawaii Territory, From Laboratory Aspect F H Foucar, U S Army
95 New Role of American Red Cross J R Kean, U S Army

New York Medical Journal

May 13, CIII, No 20, pp 913 960

96 Action of Carbon Dioxid Baths S Baruch, New York
97 Mineral Bath Therapeutics at Mount Clemens W T Lungerhausen, Mount Clemens, Mich
98 Value of Springs at Saratoga A S Downs, Saratoga Springs
99 Oertel System of Graduated Exercise W H Deaderick, Hot Springs, Ark
100 Waters at Paso Robles, California M C Myers, Paso Robles, Calif
101 Longitudinal Inversion of Colon R T Morris, New York
102 Five Glass Catheter Test A L Wolbarst, New York
103 Immune Response in Pulmonary Tuberculosis E Bonime, New York
104 Surprises for Diagnostician Revealed by Pathologist W G Baetz, Woodhaven

Northwest Medicine, Seattle, Wash

May, XV, No 5, pp 145 182

105 *Auricular Flutter, Report of Cases M H Tallman, Boise, Idaho
106 Appendicitis P Rockey, Portland, Ore
107 Id H A Shaw, Seattle
108 Surgery of Alimentary Canal C P Thomas, Los Angeles
109 Backache From Viewpoint of Orthopedist J C Graves, Jr, Spokane
110 Vaccine and Serum Therapy E R Dumke, Ogden, Utah
111 Causes Underlying Migratory Diathesis in Physicians. J P Kane, Tacoma

105 **Auricular Flutter.**—A classification by Tallman of fifty-eight cases demonstrates three different types (1) flutter in an apparently normal heart, (2) auricular flutter supervening during the course of chronic heart disease, (3) auricular flutter with partial and complete heart block The study of the radial pulse demonstrated that the rate and rhythm varies greatly in the different cases and at different times in the same case When the pulse is responding at from 130 to 160 beats per minute, a 2 1 rhythm is present which is usually regular and presents many alternations In only five cases were the polygraphic characteristics of auricular flutter definite and in accord with the clinical findings The duration of flutter, Tallman says, has apparently but little effect on the results of medication With the slowing of the ventricular rate the objective and subjective symptoms of flutter rapidly disappear In his experience digitalis must be given in large doses, frequently increasing the dose to the point of physiologic tolerance In cases of partial block, he says, it is well to proceed carefully and slowly, as in these cases life and comfort depend on the long continued use of this remedy In many cases of auricular flutter there is a tendency to recurrence which responds to treatment equally as well as the first attack When normal rhythm cannot be secured, sufficient digitalis should be taken to reduce the pulse rate to from 60 to 70 beats per minute In cases of extreme urgency strophanthin intravenously has given marvelous results in his cases

Ohio State Medical Journal, Columbus

May XII, No 5, pp 305 376

112 Classification and Treatment of Diarrhea in Childhood F H Lamb, Cincinnati
113 Harrison Antinarcotic Act as It Relates to Practicing Physician C H Wells, Columbus
114 Treatment of Chronic Intestinal Intoxication J H Schroeder, Cincinnati
115 Coloboma of Eyelid L K. Baker, Cleveland
116 Medical Fellowship, Need of Hour B R Miller, Tiffin
117 Lymphoblastomas of Gastro Intestinal Tract, Case of Hodgkin's Disease of Stomach E Scott and J Forman, Columbus
118 What Constitutes Ideal Method for Admission of Mental Patients to State Institutions E L Braunlin, Dayton
119 Office Practice in Rectal Diseases S Englander, Cleveland

Ophthalmic Record, Chicago

May XXV, No 5 pp 217 270

120 Refraction of Myopes — Consideration of Current American Teachings E Hill, Chicago
121 Etiology of Iritis as Determined by Laboratory Methods and Its Treatment, Especially by Bacterins W Reber, Philadelphia
122 Linear Method of Cataract Extraction Cases Suitable for It and Its Advantages W H Wilder, Chicago
123 Experience in Cataract Operations S B Muncaster, Washington, D C
124 Case of Orbital Endothelioma C A Leenheer, Chicago

Public Health Journal, Toronto

May VII No 5 pp 231 286

125 Social Service and Hospital Efficiency H R Y Reid
126 Feebleminded and Public Schools C G Fraser, Toronto
127 Woman's Work Before Marriage J Martin
128 Physician in Industry M W Alexander
129 State Health Organization C V Chapin, Providence R I
130 Dental Path, Its Importance as an Avenue to Infection T B Hartzell and A T Henrici, Minneapolis

Southern Medical Journal, Birmingham, Ala

May, IX No 5, pp 387 478

131 *Dietetic Treatment of Bronchial Asthma A Eustis, New Orleans
132 *Quinin and Urea Injections in Hyperthyroidism L. F Watson Oklahoma City
133 Relation of Eye Grounds to Work of Internist G C Lechenger, Houston, Texas.
134 Etiology of Pellagra With Especial Consideration of Phenomena of Sensitization to Maize and Sugar Cane Products R Blosser Atlanta, Ga
135 Possible Cure for Pellagra W F Cole, Waco, Tex

136 Negro a Menace to Health of White Race M L. Graves, Galveston Tex
137 Plea for National Committee on Eradication of Malaria I L Hoffman Newark N J
138 Treatment and Complications of Malaria W E Deeks New York
139 Use of Sodium Citrate in Transfusion of Blood by Direct and Indirect Methods W S Carter Galveston Tex
140 *Reliable Method of Blood Transfusion Report of Cases A O Singleton Galveston Tex
141 Fibroids Complicating Pregnancy, Report of Cases W Kohlmann New Orleans.
142 *Arsenobenzol Preliminary Report of Sixty Injections. L. Thompson Hot Springs Ark
143 Study of Five Hundred Tonsil Enucleations With Beck Pierce Tonsillectome. H Dupuy New Orleans
144 Tonsillectomy According to Sluder Technic P M Farrington Memphis Tenn.

131 Abstracted in The Journal, Dec 11, 1915, p 2119

132 **Quinin and Urea Injections in Hyperthyroidism**—Watson has used quinin and urea injections for hyperthyroidism over 400 times He believes the greatest field of usefulness for the injection will be found in those cases of beginning hyperthyroidism not severe enough to justify operative treatment and as a preparatory measure to partial thyroidectomy in chronic cases of toxic goiter too ill to warrant any form of immediate operative procedure

139 **Sodium Citrate in Transfusion of Blood**—Carter has found sodium citrate to be a satisfactory anticoagulant when used in the cylinder for direct transfusion in 2 per cent solution. Transfusion can be continued from 2.5 to 3 times longer with a 2 per cent citrate solution than can be done with physiologic solution A solution of sodium citrate is as efficient as a solution of hirudin as shown by the amount of blood transfused or by the time of transfusion Sodium citrate does not lessen the coagulability of the blood and is not toxic in the amount used either for direct or indirect transfusion. The coagulability of the blood is temporarily increased immediately after transfusion in which sodium citrate is used, either by the direct or indirect methods The lethal dose of sodium citrate in dogs is about 1 0 gm per kilogram of body weight when dilute solutions are injected Even when a concentrated solution is used it is not more than 0.5 gm per kilogram A 0.2 or 0.3 per cent solution of sodium citrate is sufficient to prevent coagulation and does not have any toxic effect in the amount used for indirect transfusion in man

140 **Reliable Method of Blood Transfusion.**—A glass graduated flask or container, open at the top with the bottom drawn out into two arms, or in a 'U' shape, is used by Singleton The two ends of the 'U' are inserted into the donor's and recipient s veins respectively A rubber connecting tube leads from the top of the container to the pressure bottles These bottles give a more uniform pressure, exerted continuously over a longer period of time, and the pressure can be changed from positive to negative, and vice versa more rapidly

142 **Arsenobenzol.**—The effects obtained by Thompson with this preparation he says, were as good as those obtained with salvarsan of German make

FOREIGN

Titles marked with an asterisk (*) are abstracted below Single case reports and trials of new drugs are usually omitted

British Medical Journal, London

April 29 I No 2887 pp 609-640

1 *Positions of Election for Ankylosis Following Gunshot Injuries of Joints R. Jones
2 *Method for Preparation of Nontoxic Dysentery Vaccine. H. R. Dean and R. S Adamson.
3 Therapeutic and Reaction Effects of Kharsivan (British Salvarsan) H C Lucey
4 History of Organic Compounds of Arsenic in Treatment of Protozoan Diseases. B Moore.
5 Prevention Symptoms and Treatment of Tetryl Dermatitis. E Smith
6 Case of Relapsing Paratyphoid A Infection A. M. Kennedy *and B R. G Russell.*
7 New Apparatus for Bacterial Fermentation Tests Fermentation Bulbs S Delepine.

1 **Ankylosis After Gunshot Injuries of Joints**—Wounds must inevitably end in bony ankylosis In what position should the joint be placed in order to be of the greatest use to the patient? This question is answered by Jones as follows The arm should be abducted to about 50 degrees The elbow should be slightly in front of the coronal plane of the body so that when it is at right angles and the forearm supinated the palm of the hand is toward the face As for the elbow joint, by far the greater number of men would prefer the fixation to be at just below a right angle—that is about 100 degrees In cases in which both elbows will become ankylosed it is necessary to fix the one at an angle of 80 degrees and the other at 100 degrees In the forearm, if the movements of pronation and supination are lost, the radius should be fixed midway between pronation and supination All injuries of the wrist joint should be treated with the wrist dorsiflexed This is a priceless surgical axiom, the neglect of which is grave Ankylosis of the hip joint should be encouraged in a position of very slight abduction, with thigh extended and very slight outward rotation The knee should be fixed in an extended position In ankylosis of the ankle the foot should be kept at a right angle with the leg so that the sole impinges on the ground in a slightly varus rather than a valgus position In gunshot wounds and other injuries of the tarsus and metatarsus, the deformities to be feared correspond to the common static deformity of flat or pronated foot—that is to say, to pronation at the mid-tarsal joint flattening of the longitudinal arch, and sometimes flattening of the transverse arch associated with pain in the metatarsophalangeal joints Callus exudation added to plantar malposition results in a very crippled foot. In all gunshot injuries of tarsus and metatarsus the surgeon should take care during the later stage of healing not to bandage the sole rigidly against a flat foot piece, for if that be done every irregularity of bone will conduce to callosity when walking is resumed It is necessary, therefore, at this stage to adjust a splint having an inside arch padded to conform to the natural shape of the foot Eversion of the foot should be guarded against, and the hollow of the arch should, when possible be emphasized Later, the heel of the boot should be raised on the inner side to obviate eversion, and, if the metatarsals are involved, in order to allow of early walking, a bar should be placed across the sole of the boot behind the tread

2 **Preparation of Nontoxic Dysentery Vaccine**—The results of their experiments on forty-seven rabbits have convinced Dean and Adamson that it is possible by the use of dilute solutions of hypochlorous acid to prepare a Shiga vaccine the injection of which is practically harmless to the rabbit but is nevertheless followed by the production of a satisfactory degree of immunity

Indian Medical Gazette, Calcutta

April LI No 4 pp 121-160

8 Cataract Operations Old and New M Corry
9 *New Method of Dressing Eyes After Cataract Extraction. F P Maynard.
10 Hypochlorous Acid as Antiseptic in Wounds E A. R. Newman
11 New Apparatus for Continuous Irrigation of Wounds in Field J A Shorten
12 Flies in Jail. T S Ross
13 Case of Sarcoma of Dura Mater S B Pal.

9 **Dressing Eyes After Cataract Extraction**—In order to produce an even pressure over the front of the eyeball Maynard uses swabs of wet sterilized wool applied as follows Wool pulled not cut, into pads about an inch thick and the size of the dry wool pads usually used 3 inches in diameter, are sterilized by boiling in 1 in 5,000 biniodid solution After the completion of the operation two of these sopping wet not squeezed out, are laid on the two eyes With the straightened fingers they are gently pressed down over the eyes, so that the swab becomes molded to the eye and fill in the hollows round it Over this swab is placed a wet pad consisting of lint or six layers of gauze and then a figure of eight bandage is applied fairly firmly On opening the dressing next day the wool gauze will be found dry

and forming a complete mold of the eyeball and orbital opening This wet molding method is very comfortable and produces no feeling of uneven pressure while it allows the eye to move easily It is almost impossible to open the eyelids

Journal of Laryngology, Rhinology and Otology, London

April XXXI, No 4, pp 121 176

14 Partial Resection or Window Resection of Larynx for Intrinsic Malignant Disease H L Lack
15 Removal of Carcinoma of Hypopharynx With Plastic Restoration of Lumen W Mollison
16 Results of Submucous Resection of Septum in Children C H Hayton

May, No 5, pp 177 224

17 *Atrophic Rhinitis (Ozena) and Tuberculosis D McKenzie
18 Operative Treatment of Fibroma of Nasopharynx A J Brady

17 **Atrophic Rhinitis (Ozena) and Tuberculosis**—Postmortem evidence of the frequent association of tuberculosis and atrophic rhinitis (ozena) has been found by McKenzie as well as clinical evidence of the same (*a*) in the personal history and status of the ozenatous patient, (*b*) in the family history Tuberculin tests showed active tuberculosis in the majority of cases of ozena This was supported by the phenomena and results of the tuberculin treatment There is some evidence tending to show that ozena is commoner in patients with phthisis pulmonalis than in the general community There is also evidence tending to show that the acid-fast bacillus of the ozenatous crusts is an attenuated variety of the tubercle bacillus Ozena resembles in many of its details other 'paratuberculous" diseases McKenzie's final conclusion is that ozena, as we see it in England, is a manifestation of tuberculosis

Lancet, London

April 29 I No 4835 pp 895 942

19 Infantile Mortality and Relative Practical Value of Measures Directed to Its Prevention S G Moore
20 Treatment of Gunshot Fractures E W H Groves and T H Brown
21 Cases of Intestinal Ulcer Perforations at or Near Pylorus W H Battle
22 Cases of Pneumococcal Bronchitis J Goodhart
23 Blood Findings in Epilepsy R H Spangler
24 *Significance of Presystolic Heart Murmurs T Lumsden
25 *Typhoid Carrier S F Dudley
26 Case of Marked Postdiphtheritic Paralysis W A Daley and C V McCormack
27 Case of Os Tibiale Externum Simulating Fracture of Navicular Bone C P G Wakeley

24 **Significance of Presystolic Heart Murmurs**—It is most important from an insurance company's point of view, says Lumsden, that these cases should be carefully differentiated, but when the examiner is in any doubt it is wiser to treat all presystolic murmurs as serious than to risk accepting even at an increased premium patients suffering from so serious a condition as either mitral stenosis or aortic regurgitation Even when after most careful examination it is ascertained that it is a case of "astenotic" presystolic murmur Lumsden recommends that several years should be added to the age of the patient when calculating the premium he ought to pay, since many of these cases have slightly abnormal mitral valves which are more apt to become incompetent than a normal valve The number of years to be added must depend on the particular case, but should never be less than five "Astenotic" cases can, however, be accepted for any ordinary occupations and even for posts of such importance as tramdrivers, chauffeurs, etc, since fainting is never a symptom of this condition per se The existence of this murmur is not a bar to military service, nor to any form of sport or exercise The murmurs discussed by Lumsden are (*a*) Flint's murmur, (*b*) stenotic presystolic murmur, (*c*) astenotic presystolic murmur, (*d*) normal heart, (*e*) stenotic presystolic and systolic murmurs The sound, he says, may be imitated by pronouncing, (*a*) Flint's frrip, dupfrrrip, dupfrrrip, (*b*) stenotic frrrip, dupup, frrrip, dupup, (*c*) astenotic frrip, dup, frrrip, dup, (*d*) normal lub dup, lub dup, (*c*) stenotic and systolic frrripwhist dup, frrripwhist dup

25 **Typhoid Carrier**—The carrier whose case is discussed by Dudley was a sailor His service on various ships was marked by the appearance of typhoid He served on twelve ships on which fifty-three cases occurred subsequent to his enlistment The following observations were made on this carrier while in the hospital The urine was always sterile Blood cultures were negative The Widal reaction was positive up to a 1 150 dilution, it varied very slightly in strength The appearance of typhoid bacilli in the stools was intermittent, three or four examinations being negative, followed by two or three positive results In seventeen examinations of the feces at intervals of about three days *B typhosus* was isolated seven times

Medical Journal of Australia, Sydney

April 1, I, No 14, pp 277 296

28 Surgical Experiences at War G A Syme.
29 *Meningococcal Carriers S T Champtaloup and J T Bowie
30 Insanity Due to Mitral Stenosis, Report of Cases W A. T Lind
31 Case of Paget's Disease (Osteitis Deformans) H W Connolly
32 Case of Meningococcal Conjunctivitis T C Ker and R. O Douglas

April 8 No 15, pp 297 318

33 Glancing Bullet Wounds of Skull G Owen
34 Colloid Degeneration of Skin L Johnston and N Paul.

April 15, No 16, pp 319 336

35 Neuroses and Psychoses in War A W Campbell
36 Bacteriologic Examination of Urines L B Bull

29 **Meningococcal Carriers**—Forty-three civilian cases were fully investigated by Champtaloup and Bowie of which five (or 11 6 per cent) were found to harbor the meningococcus in the nasopharynx One individual developed meningococcal meningitis and died Thirteen persons of the forty-three investigated had been in recent close contact with troopers on leave, and the bacteriologic finding was positive in three cases Several of these contacts had been using antiseptic gargles and douches, however, before being examined The remaining thirty had not to their knowledge been in contact with soldiers, and of these only two yielded positive results Four of the civilian patients subsequently died One developed meningococcal meningitis, a second, from whose nasopharynx a profuse growth of meningococci was obtained, developed a fatal streptococcal septicemia, a third, in whose nasopharynx no meningococci were found, developed acute hydrocephalus with no postmortem evidence of bacterial infection, and a fourth, also negative, developed tubercular meningitis These fatal cases bear out the importance of a bacteriologic examination of all suspicious cases during an epidemic, otherwise they might have been returned as fatal cases of meningococcal infection

Practitioner, London

May, XCVI, No 5, pp 447 572

37 *Some Surgical Procedures in Gunshot Fractures of Mandible F Eve
38 Treatment of Venereal Diseases in the English Army E G Ffrench
39 Treatment of Syphilis in English Army H J McGrigor
40 Prevention of Venereal Diseases in English Army O May
41 Eye Injuries of Warfare A W Ormond
42 War Neuroses H Campbell
43 Dysenteries Other Than Amebic G C Low
44 Treatment of Tetanus K Goadby
45 Epidemic Jaundice A E A Ismael
46 Typhus Work in Serbia L M Chesney
47 Soldier's Heart W B Thorne
48 Case of Pneumothorax Secondary to Fracture of Ribs A Graham Stewart.
49 Surgical Disabilities of Troops in Training F J Cutler

37 **Surgical Treatment in Gunshot Fractures of Mandible**—Although he has used wire successfully in a number of cases, Eve considers transplantation of bone the ideal method for bridging over gaps in the mandible He has not yet seen a case in which plating of a gunshot fracture of the mandible seemed advisable He points out that in the earlier stage of the treatment of severe comminuted fractures of the mandible, special care should be taken to preserve fragments of bone which may be viable If they necrose, removal may be effected later, and, meanwhile, they may prevent displacement while new bone is being thrown out

Annales de Medecine, Paris

III No 1 pp 1 108

50 Blood Plates in the Spleen (Etude sur les plaquettes de la rate) L. Le Sourd and P Pagniez.
51 Typhoid and Paratyphoid Infections in the Vaccinated M Labbe
52 *Mild Typhoid and Febrile Disordered Digestion From Stomach Trouble (Les formes legeres de la dothienenterie et l embarras gastrique febrile) L Bernard
53 *Influence of Antityphoid Vaccination on Sero Agglutination and Course in Typhoid and Paratyphoid Fever (Etudes sur la fievre typhoide I and II) E Rist
54 Oculomotor Paralysis After Paratyphoid Fever G Guillain and J A. Barre

52 **Pseudo-Typhoid**—Bernard says that it is often difficult to distinguish between mild typhoid and febrile gastric derangement and yet they must be differentiated as the latter may reproduce the incomplete form of typhoid while in reality having no connection with typhoid The colon bacillus is generally the one responsible for it

53 **Typhoid After Vaccination**—Rist comments on the fact that the number of typhoidal affections has apparently not diminished in the last year The total number of cases averages about the same as before but the cases of true typhoid are far below the usual number and paratyphoid cases have taken their place Not much is gained, he remarks if we merely substitute paratyphoid for true typhoid This reduces the mortality of course but the morbidity has not been modified according to his s atistics Vaccination must ward off both typhoid and paratyphoid to accomplish its purpose

Archives de Medecine des Enfants, Paris

April XIX No 4 pp 169 224

55 Pathologic Physiology of Defective Development and Debility in Infants. (Des hypotrophies et des cachexies des nourrissons.) P Nobecourt To be continued
56 Anaphylaxis and Serotherapy in Children J Comby

Archives Mens d'Obstétrique et de Gynecologie, Paris

January March V No 1 2 3 pp 1 92

57 Histology of the Uterine Mucosa in Normal Pregnancy A Brindeau and Nattan Larrier
58 *Ovarian Cysts Following Evacuation of Vesicular Mole (Signification clinique des kystes luteiniques des ovaires se developpant après l evacuation d une mole hydatiforme) P Bar
59 *Modifications of Pulse and Blood Pressure During Menstrual Period (Des modifications du pouls et de la tension arterielle pendant la periode menstruelle.) P Balard and J Sidaine.

58 **Ovarian Cysts Following Mole**—Bar remarks that a cyst developing in the corpus luteum after evacuation of a hydatidiform mole is of too frequent occurrence to be merely a casual coincidence Kroemer found them in 59 per cent of the cases of mole he had compiled Bar has encountered a similar case The patient was a young woman who had had a hydatidiform mole removed three months before The adnexa seemed to be normal at that time but three months later both ovaries were found transformed into masses of cysts with hyperplasia of the corpus luteum tissue A small mass of molar vesicles was also found in the uterus This case and similar ones on record teach the necessity for removing the uterus and adnexa in operating for a mole when there is the least suspicion of cyst formation in the ovaries Also that after removal of a mole from the uterus if the ovaries display a tendency to cystic degeneration we can assume that elements of the mole are still proliferating in the interior of the uterus The significance of ovarian cysts in these circumstances is still more pressing when there is a tendency to persisting uterine hemorrhage Prompt operative measures are required, including the removal of the uterus

59 **Modifications in Pulse and Blood Pressure During Menstrual Period**—Balard and Sidaine review the literature on this subject and give charts of the findings during a three months period in five young and healthy pupils in the midwifery school The pulse showed decided variations in all but one of the young women, and the blood pressure varied in all but not to such an extent as the pulse There did not seem to be any regular rules for all cases or even for one person at all times, except that the pulse increased just before the onset of the menses and dropped back to normal or transiently below at the close The charts demonstrate anew the complexity of physiologic phenomena

Bulletin de l'Academie de Medecine, Paris

April 18 LXXV No 16 pp 425 452

60 Appeal for Suppression of Garbage Picking Inside City Limits (Sur la suppression du chiffonnage à Paris) Wurtz.
61 The Prevalence of Syphilis Not Recognized Before the War (La syphilis, avant la guerre meconnaissance de son extreme frequence) L Landouzy
62 Cerebrospinal Meningitis Sixty Four Cases Neveu Lemaire.
63 Rational Treatment of Syphilis Under Guidance of Wassermann Test E Jeanselme

61 **Prevalence of Syphilis**—For more than ten years Landouzy has examined all the patients in the Laennec clinic for general medicine, and has found a constant average of 5 or 6 syphilitics in every 32 women, that is, from 15 to 18 75 per cent, and of from 7 to 9 among every 32 men, that is from 21 to 28 135 per cent It should be more generally known he adds that the so-called smokers' patches" are practically pathognomonic of syphilis and it is so easy to detect them at a glance The Wassermann test will confirm their specific nature The pandemic of syphilis even before the war demanded the public health measures which the war has imposed

Le Nourrisson, Paris

March IV No 2 pp 65 128

64 Sterilization of Milk Without Heat Not Practicable to Date. (La sterilisation du lait procedes dans lesquels on n emploie pas la chaleur) A B Marfan
65 Localized Forms of Tuberculosis in Young Infants (Formes cliniques de la tuberculose du nourrisson) Combe
66 Blood Serum More Reliable Than Milk for the Wassermann Test for Wetnurses (La recherche d une sensibilisatrice syphilitique dans le lait Peut elle servir au diagnostic de la syphilis des nourrices?) Merisset

Paris Médical

April 22 VI No 17 pp 393 408

67 Malaria in Flanders. (Le paludisme dans un coin des Flandres) F Rathery and R Michel
68 *Rapid Healing of Abscesses in the Neck Without Scars Under Filiform Drainage (Guerison rapide et sans cicatrices des adenites et des abcès aigus et chroniques du cou) H Chaput.
69 Apparatus for Early Exercise of Wounded Leg in Bed Amieux

68 **Healing of Abscesses in the Neck Without Scars**—Chaput refers to suppurating glands and abscesses in the neck of tuberculous or other origin A small superficial abscess he pierces with a needle drawing back with it two strands of silkworm gut which he knots to form a loop, repeating the process perpendicular to the first and thus providing crucial drainage A deep abscess he lances at the tip and through this minute incision he probes the depths and recesses then with a Reverdin needle introduced through the incision he pierces the skin from within at the poles of the abscess and the diverticula Silkworm gut is drawn back with the needle and he ties the ends together at the central incision This provides radiating drainage A single drain may suffice if at the absolutely lowest point A fine rubber bougie or spiral wire may answer likewise for the filiform drainage With active suppuration induration is liable to follow evacuation of the abscess if the patient is up and about Hence it is better to leave the drains in place until all induration has subsided keeping the patient in bed or at least confined to the room Chaput says that filiform drainage is nothing new but it has never been applied as generally as he advocates, and its advantages have not been appreciated

Presse Médicale, Paris

April 20 XXIV No 25 pp 177 184

70 Prophylaxis of Malaria (La prophylaxie du paludisme.) H Vincent
71 *Causalgia and Its Treatment. (De la causalgie envisagee comme une nevrite du sympathique et de son traitement) R. Leriche

71 **Burning Neuralgic Pain Causalgia**—Leriche states that this burning type of neuralgic pain has certain features which suggest that it is the result of irritation at some point of the sympathetic innervation of the limb involv The war has rendered this causalgia comparatively cc

and has confirmed the assumption that it is a neuritis of some part of the sympathetic system The most convincing argument in favor of this assumption is the success of therapeutic measures based thereon, aiming to modify the peripheral sympathetic Leriche acted on the sympathetic by stripping the peripheral arteries, supplementing this denudation by severing the perivascular nerves and, when possible, removing the entire sheath of the vessel over a certain extent In one case of agonizing causalgia from a gunshot wound, he denuded the humeral artery and excised its sheath for a stretch of 12 cm Improvement followed at once The pains were materially reduced, the vasomotor phenomena subsided and the relief has been permanent during the six months to date In a second case there was complete lax paralysis of the left arm after a gunshot wound with fracture of the clavicle The arm was constantly cold and various trophic disturbances developed, with paroxysms of burning pain in the hand The causalgia by the sixth month was most distressing, and Leriche then exposed the humeral artery There was no pulse or blood in it, and it was reduced to a cord scarcely 2 or 3 mm in diameter The neighboring nerves were soft He removed the arterial sheath for quite a distance, there was no hemorrhage The next day there was formication in the hand and it felt warmer The trophic blisters and other disturbances retrogressed, and in a fortnight the man could move his arm a little The pains had been materially mitigated from the first The resection of the arterial sheath modifies the perverted sympathetic innervation by acting on the peri-arterial nerve plexuses involved The mechanism and effect are similar to those of section of the cervical sympathetic in treatment of trigeminal neuralgia suppression of certain diseased elements of the sympathetic innervation restores freedom of action to the other vasomotor ramifications In both his cases the clammy, livid hand grew warm and normally pink, showing that the upset vasomotor balance had been restored

For the leg he would attack the sciatic or femoral artery, as these nourish the sciatic nerve from the rear and front He has had no occasion to operate on the legs, but is convinced that this simple method of acting on the peri-arterial sympathetic innervation will relieve in many cases of sympathetic neuritis causing painful vasomotor troubles, especially after wounds of the hand and forearm in which the trunk nerves themselves are free from all injury Possibly the procedure may benefit also in certain cases of reflex contracture and paralysis suggesting a vasomotor element In short, he concludes, it is a new field to explore, and a promising one

Progrês Médical, Paris

March 20 XXXII No 6 pp 41 48

72 Diagnosis and Treatment of Gas Gangrene A Chalier
73 *Stricture of the Rectum (Retrecissement du rectum) Potherat.
74 *Pathogenesis of Tuberculous Rheumatism (Pathogenie du rheumatisme tuberculeux) Rathery

April 5, No 7, pp 49 56

75 The Sputum With Old Wounds of the Chest (L'examen histochimique des crachats dans les vieilles blessures du thorax) M Loeper, G Verpy and L Cosmier
76 *Typhoid Orchitis and Epididymitis. (Orchi-epididymite typhoidique) D Olmer and R Voisin
77 Simple Calculation to Locate Projectile in Tissues (Radiologie sur une methode de zero fournissant immediatement en vraie grandeur la profondeur du projectile a localiser) G Andrault

73 **Cancer of the Rectum**—In a typical case described the robust and vigorous man of 51 complained merely of "internal hemorrhoids," saying they had been troubling him for two years His former physicians had treated him for constipation and congestion, but none had palpated the interior of the rectum Potherat placed the man on his side, the thigh and leg completely extended while the upper thigh and leg were flexed He then anointed the region and his rubber glove, and his finger found at once a large ulceration in the rectal mucosa, adherent to the prostate He discusses the advisable technic in such cases and says that with a palliative artificial anus at the sigmoid flexure or descending colon one such patient survived in good condition for four years, another for thirteen months, taking walks of 16 kilometers a day Potherat deplores that so few physicians make a routine practice of digital examination of the rectum, and thus cancerous growths reach an inoperable stage before they are suspected

74 **Tuberculous Rheumatism**—Rathery describes two cases of chronic rheumatism to illustrate one form and suggest its explanation One woman of 32 at 18 had rheumatic trouble in the right hand for two months, and two years later in the right knee, and no further disturbance for twelve years Then chronic bronchitis developed, with rheumatic pains in her fingers, and the joints swelled, with stiffness of the wrist and, finally, hydrarthrosis of the right knee Radiography confirmed the deformity of the joints, but the process is not so extreme as with other forms of rheumatism There are also signs of an apical process A second case, in a man of 38, is practically identical Rathery's explanation of such cases is that the early rheumatic phenomena were due to an arthritic soil With this, chronic rheumatism develops on the occasion of any ordinary or specific infection or intoxication In these cases tuberculosis was responsible

76 **Typhoid Orchitis**—The orchitis and epididymitis developed during convalescence from typhoid and left limited induration The course was about six days Others have reported three cases in the recent epidemic of typhoid The affection was unilateral in all, but the cord was involved in three of the cases and the vaginalis in two There was suppuration in two cases and a relapse in another case None of the patients had gonorrhea Typhoid bacilli were cultivated from the process in two cases, the colon bacillus in one, and the paratyphoid B in one This typhoid complication resembles the orchitis of mumps by its rapid course, and the orchitis of gonorrhea by the involvement of the cord and epididymis, while the tendency to suppuration is peculiar to it

Correspondenz-Blatt für Schweizer Aerzte, Basel

April 15, XLVI No 16, pp 481 512

78 *Miliary Tuberculosis With Chronic Benign Course (Ueber Miliar tuberkulose) L. von Muralt
79 *Iodin in Treatment of Goiter (Zur Joddarreichung bei Kropf) Grumme.

78 **Benign Miliary Tuberculosis.**—Muralt describes a case which shows the possibility of miliary tuberculosis developing in a mild chronic form with ultimate recovery The patient was a physician of 35 with an inherited neuropathic and tuberculous taint, but healthy, except for "children's diseases" and pleurisy at 22, until the age of 31 when, after several months of overwork as physician at a tuberculosis dispensary, with inadequate food, pleurisy with effusion developed insidiously and kept up for fifteen months without impairing the general health particularly Then miliary tuberculosis developed with a stormy onset but soon subsided to such a mild course that the contrast between the Roentgen findings and the good general health was striking The Roentgen picture was highly characteristic within three weeks of the first miliary onset After two years of this, two tuberculous tumors in the scrotum required excision in turn and later tumors of the same kind developed in the spinal cord and medulla, one finally proving fatal after two had been removed Miliary tuberculosis seems to be accompanied by tumors in the central nervous system comparatively often Muralt has encountered a second case which demonstrates this anew A young woman with acute miliary tuberculosis and night sweats presented symptoms of a tumor in the brain On account of the septic condition no attempt at operation was ventured and death followed in less than a year from the first symptoms of the miliary tuberculosis In the first case there were no night sweats at any time, and after the initial phenomena the disease subsided into an entirely latent course and death occurred eight months later, from the tumors, with no further signs from the miliary disease

79 **Iodin Treatment of Goiter**—Grumme insists that endemic goiter is due to a lack of iodin in the food, and hence that administration of iodin benefits endemic goiter He regards it as probable that if Switzerland would promote

the importation of sea fish, so that they would be plentiful and cheap goiter would become less prevalent More than two thousand years ago the Greeks recommended sponge charcoal (*Schwammkohle*) for goiter, which was an iodin treatment, and experience has confirmed the value of iodin in prevention and cure of endemic goiter Regions where goiter is endemic are usually free from the exophthalmic form in which iodin does harm Even the eating of sea fish aggravates Basedow's disease, as Grumme has confirmed in his own practice It is important therefore, to exclude any tendency to the Basedow type before permitting iodin A tranquil temperament a phlegmatic disposition usually exclude exophthalmic goiter The endemic mountain-goiter is generally inclined to be hard and sometimes knobby while the Basedow goiter is soft He warns in conclusion that the administration of iodin requires great care not only for those with goiter but in general practice as there may be a latent predisposition to Basedow s disease which iodin may fan into a flame Oswald regards this danger as so serious that he advises against iodin for any form of goiter

Gazzetta degli Ospedali e delle Cliniche, Milan

April 20 XXXVII No 32 pp 497 512

80 Tracheotomy and Intubation in Laryngeal Diphtheria (La tracheotomia e l intubazione nelle stenosi laringee difteriche.) V. Franchini

Policlinico, Rome

April 23 XXIII No 17 pp 517 548

81 Case of Acute Myeloid Leukemia in Woman of Fifty One With Necropsy C Romagnolo
82 Wounds of the Knee in War (Sull'indicazione operatoria nei casi di proiettili nell articolazione del ginocchio e sulla tecnica adottata per praticarne l'estrazione.) M. Fasano
83 Encouraging Results With Sodium Citrate in Treatment of Pellagra. (La cura della pellagra con le iniezioni di citrato trisodico) A. Secchieri

April Surgical Section No 4 pp 97 128

84 Functioning of the Great Omentum With Strangulated Hernia. (La funzione del grande epiploon negli strozzamenti erniari dell intestino Ricerche e considerazioni cliniche e terapiche sopra 52 interventi per ernia strozzata) I Scalone Commenced in No 3
85 *Comparison of Various Technics for Autoplastic Operations Advantages of the Italian Method (Il metodo italiano di autoplastica nelle estese asportazioni muscolo-cutanee.) O Cignozzi.
86 Ligation of Coronary Arteries and Veins. L. Dominici To be continued

85 **Extensive Pedunculated Flaps for Autoplastic Operations.**—Cignozzi extols the advantages of the Italian method for autoplastics describing an illustrative case In an industrial accident the skin and muscle had been torn from the elbow and adjacent regions over an expanse 15 by 25 cm. in size This was covered with a flap cut in the side of the chest and abdomen, the upper end not cut across the arm fastened immovably to prevent any traction on the flap In one week the flap was cut partly across and the twelfth day was completely severed By the twenty-fifth day the flap had grown entirely in place and by the fiftieth day healing was complete, the functioning of the elbow normal.

Riforma Medica, Naples

March 13 XXXII No 11 pp 281 308

87 *Diabetes of Nervous Origin. (Del diabete neurogeno) T Silvestri.

March 20 No 12 pp 309 336

88 Agglutination After Vaccination Against Typhoid (La reazione di Widal nei vaccinati contro il tifo) L. Datta (Idem.) A. Ceconi.
89 Studies on the Eosinophils and Basophil Leukocytes. G Gross To be continued

87 **Diabetes of Nervous Origin.**—Silvestri reports the clinical course and necropsy findings in a case of diabetes in which there were no pathologic anatomic findings capable of explaining the diabetes He assumes that it was of nervous origin, as the neurasthenic man of 53 had a family history of much nervous and mental disease. The literature on the subject of diabetes developing after disastrous speculation or other nervous shock is reviewed, and authors cited for and against the assumption that diabetes can be brought on by nervous factors alone Silvestri's four other cases also apparently confirm this beyond question One patient was a neurasthenic man with inherited psychopathic taint whose urine was found to contain sugar after a period of much worry The urine after a medical examination always contained sugar In the course of a few years the neurasthenia subsided and the urine became normal At present there is no further trace of the neurogenous "diabetes' of eight years before although no attempt at dietetic treatment had been made Another patient was a woman with a family history of diabetes After an attack of pneumonia she had mild glycosuria which yielded promptly to restriction of carbohydrates until her son developed typical diabetes which ran its course to a fatal ending in three years After this the mother's glycosuria became permanent unmodified by dietetic measures In the two other cases the glycosuria came on directly after a severe grief or fright These experiences testify that diabetes may occur for the first time or be roused or aggravated by nervous shocks and Silvestri explains the probable mechanism by which this is brought about He has been unable to trace it to any one gland or other organ, but the *influence of a hereditary taint is obvious*

Semana Medica, Buenos Aires

XXIII No 3 pp 59 86

90 Osteoplastic Operations After Amputation of the Leg (Operaciones osteoplasticas diafisiarias de la pierna.) O Copello
91 Treatment of Reflex Enuresis. F A. Deluca.
92 Local Anesthesia in Extraction of Teeth (Oportunidad de la extraccion) O F Ferreira

No 4 pp 87 114

93 Serotherapy in Pneumococcus Diseases (Sobre terapeutica esencial de diversas neumococcis por el Haptinogeno Neumo Mendez) N S Loizaga
94 Antagonistic Action of Strychnin and Antitetanus Serum (Investigaciones comparadas acerca del antagonismo de la accion contra la estricnina de los varios sueros antitetanicos) G Tizzoni and P Perrucci

Praktichesky Vrach, Petrograd

XV No 9 pp 81 88

95 Heart on the Right Side (K klinikie dextrocardia i dextroversio cordis.) E J Stolkind Commenced in No 8

Russkiy Vrach, Petrograd

1915 XIV No 47 pp 1105 1128

96 Effect of Asphyxiating Gases on the Nervous System (K voprosu o vliyanii primienyamikh germantsami udushlivikh gazov na nervnuio systemu.) M P Nikitin.
97 Gas Gangrene (O gazovom omertvienii u ranenikh) V P Miroliuboff

Nederlandsch Tijdschrift voor Geneeskunde, Amsterdam

March 25 I No 13 pp 1057 1144

98 Differential Diagnosis of Smallpox (Over de pokken te Amsterdam in 1903 en 1904) A Snoek
99 *The Interval Leukocyte Picture in Epilepsy (Het witte bloedbeeld bij lijders aan epilepsie.) A. Schoondermark.
100 Congenital Bilateral Microphthalmus With Cysts in Lower Lids and Left Harelip H Weve

99 **Lymphocytosis in Epileptics**—Schoondermark found in examining the blood picture of epileptics at the state hospital for epilepsy that the number of leukocytes was constantly high The increase was in the lymphocytes which were both relatively and absolutely more numerous than in normal conditions She gives the details from thirty-one cases examined during intervals between seizures No characteristic differences between the blood pictures of the organic and the genuine" types could be discovered

Hospitalstidende, Copenhagen

April 5 LIX No 14 pp 305 328

101 Improved Technic for Cultivation of Cholera Germs (En Maade til Fremstilling af øjeblikkelig brugbart Dieudonne Næringssubstrat til elektiv Dyrkning af Choleravibrioner) H C Hall.

Hygiea, Stockholm

April LXXVIII No 7 pp 417-480

102 *Atrophy of the Small Muscles of the Hands in Consequence of Compression of the Spinal Cord in the Neck (Om atrofier i handens småmuskler vid kompression av översta cervikalmargen.) G Soderbergh and C. Sundberg

102 **Atrophy of the Hand Muscles from Compression of the Spinal Cord**—The compression was from an extramedullary tumor in the neck in both of the two cases described One has already been listed in these columns as a successful operative case (1912, LIX, p 1414) The other patient was a man of 59 and the necropsy findings are discussed The atrophy was so pronounced in both that a casual coincidence seems to be out of the question Atrophy of the small muscles of the hands, especially of the thenar eminence and of the first interossei muscle, may thus aid in the diagnosis of compression of the upper segments of the spinal cord on that side The tumor extended from below the arch of the second vertebra to above the atlas in one case, and from the second to the fourth segment of the cervical spinal cord in the other

Ugeskrift for Læger, Copenhagen

March 30 LXXVIII No 13 pp 459-492

103 Otogenous Subperiosteal Abscesses in Temporal Region, Thirty One Cases (Den otogene subperiostale Absces i Regio temporalis) R Lund

April 6, No 14 pp 493 540

104 Technic for Gram Staining G Jørgensen
105 *Rapid Technic for Determination of Albumin in the Urine (En hurtig Metode til kvantitativ Bestemmelse af Aeggehvide i Urin) K L Gad Andresen

April 13 No 15 pp 541 584

106 *The Residual Nitrogen in the Blood as Index of Kidney Efficiency (Den kliniske Undersøgelse af Nyrefunktionen særlig ved Bestemmelse af Rest Kvælstoffet) V Scheel Commenced in No 14
107 Venereal Diseases at Copenhagen (Kønssygdommene i København for og efter 1906) S Lomholt

105 **Simple Test for Albumin in the Urine**—Andresen has been giving E Lenk's method a thorough trial (It was described in these columns Jan 1, 1916, p 66) He found it even more dependable than other technics if temperature, interval, etc, are uniform

106 **Residual Nitrogen in the Blood as Index of Kidney Efficiency**—Scheel's extensive research on the retention of "rest nitrogen" in the blood as an index of renal function has convinced him that determination of the residual nitrogen is as necessary a routine measure and even more important than to examine the urine for albumin It differentiates nephritis from various conditions with hypertrophy of the heart and high blood pressure, which are so frequently mistaken for nephritis It serves further as a guide to treatment, and throws light on the prognosis It is important particularly because it shows to which of our patients with nephritis we can permit protein feeding freely and which must have their protein cut down In his discussion of the various other tests of kidney function, he remarks that tests with substances alien to the body are never entirely satisfactory Also that the functioning of an organ fluctuates at times, and a single test is of little value Retention in the blood of substances normally eliminated in the urine, on the other hand, gives direct insight into the eliminating and excreting power of the kidneys, and Bang's micromethod for nitrogen determination has made it possible to detect every degree of retention of nitrogen in the blood serum The details of a number of cases of nephritis are tabulated to illustrate the value of the findings in nephritis with and without uremia, compared with the rest nitrogen findings in 57 patients free from nephritis In the 12 cases of uremia, the residual nitrogen was in abnormal amounts, over 100 up to 289, in 11 of the cases, but it ranged only from 27 to 45 in one man of 38 He had hydremia, the albumin content being less than half the normal figure The case shows the necessity for estimating the proportion of water in the serum, as the dilution affects the proportion of nitrogen The uremia in this case was mild and soon subsided

When sodium chlorid is retained, it passes into the tissues and edema fluids, the proportion of sodium chlorid in transudates is often higher than in the blood But this does not occur with retained nitrogen, if the proportion of residual nitrogen in the blood is approximately normal, and there is no edema, the conclusion is justified that the kidney functioning is adequate for the needs of the moment Even with edema, the same conclusion is justified as the retention of fluids may be the result of causes other than insufficient kidney functioning In the 66 cases of nephritis without uremia, the residual nitrogen figure was normal in a number—that is, below 40 mg in 100 c c blood—but these were all cases of hydremia masking the retention, or else the nephritis was extremely mild In dubious cases, a test meal of considerable protein, comparing the figure for the residual nitrogen before, a few hours afterward and the next morning, will show at once the functional capacity of the kidneys There is no increase in the residual nitrogen in the healthy after a meal of 85 gm protein, but in one man of 26 with nephritis the figure more than doubled in about twelve hours, in another case, apparently as severe, the figure remained unchanged and recovery was soon complete This test proved particularly useful in distinguishing between albuminuria of the benign, orthostatic type and that due to actual nephritis

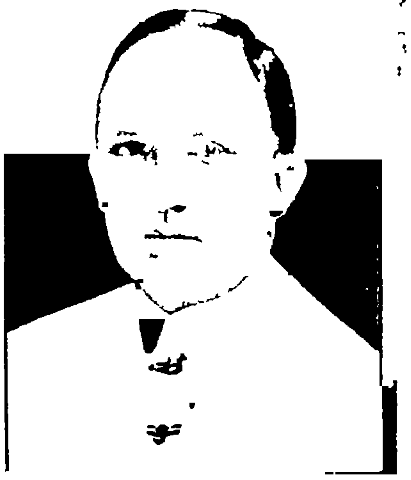
The fourth table gives the details of 57 patients with various affections but apparently sound kidneys The residual nitrogen was within normal range in all but a few The exceptions were one of the four infants, some patients with liver disease (the bile in the blood possibly explaining the increased nitrogen figure), and two patients without symptoms of nephritis, but necropsy revealed far advanced disease of the glomerular apparatus The more active metabolism in infants may render normal a high nitrogen content in the blood The further course of all the cases cited confirmed the reliability of the residual nitrogen findings as an index of kidney efficiency, especially of the functioning of the glomerular apparatus Even when the clinical picture includes albuminuria, tube casts and edema, if the residual nitrogen keeps within or close to normal range, we can conclude that the glomerular apparatus is intact and that the storm will blow over in time Some striking instances are related in which the prognosis was based on the persistingly normal residual nitrogen content of the blood serum, and reexamination some months later showed the urine and blood findings practically normal, no edema, and the blood pressure only slightly above normal

Scheel warns that the residual nitrogen content should be determined more than once as the figure may fluctuate with the amount of protein in the diet, and it may rise and fall abruptly with acute nephritis or acute exacerbations of chronic glomerular nephritis In chronic nephritis a rise in the residual nitrogen figure may be the only sign to warn of impending uremia In treatment, he recalls that Bang found that well fed rabbits bore without much harm induced nephritis to which the underfed invariably succumbed Good nourishment is indispensable in treatment of nephritis, and we must ascertain what the patient can tolerate and not impose unnecessary restrictions Retention of salt is easily determined from the urine salt content The amount of protein to be allowed in the diet can be estimated from the behavior of the residual nitrogen in the serum He suggests that it is a simple matter to send a specimen of serum to a laboratory for examination

The residual nitrogen in itself does not seem to be responsible for any special symptoms, but serves merely as an index of the toxemia and its degree It may sound the warning before the toxemia has begun to induce symptoms The 155 cases on which Scheel's conclusions are based are particularly instructive as many of them were under prolonged observation, the ultimate course confirming the conclusions drawn on the basis of the proportion of the residual nitrogen retained in the blood He says that he has been working for nearly two years with Bang's new method although Bang did not publish it until December 1915 (*Biochemische Zeitschrift, lxxii*) It is on the same principle as his micromethod for determination of the sugar in the blood The blood or serum is dropped on paper and a precipitating fluid is applied to the paper This precipitates the precipitable elements in the blood while the nonprecipitable diffuse into the fluid Bang at first used mercuric chlorid for the precipitating fluid but found that phosphomolybdic acid precipitates the albumin more perfectly His formula for the solution is 0 5 per cent phosphomolybdic acid, 1 5 per cent sulphuric acid, and 0 5 per cent sodium sulphate

Blue.

DICAL ASSOCIATION 1916 1917



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CASES ILLUSTRATING THE FAULTY TREATMENT OF SUPERFICIAL MALIGNANCY

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Within the past few years there has been much written concerning the prevention of cancer, its early diagnosis and its proper treatment. It is interesting to see just what fruits this propaganda is bearing. Unquestionably many more persons with premalignant conditions are consulting the surgeon and dermatologist than in former years, but that the situation is yet far from perfect will be revealed by a consideration of the following cases.

During the past three years I have been consulted by thirty-two private patients for malignant conditions of either the skin or mucous membranes of the mouth. Of this number only six consulted me for early, untreated stages of cancer. One of these had a cancer of the under surface of the tongue, while the remainder were suffering from cancer of the face.

The faults in handling the other cases naturally group themselves under three headings: first, neglect on the part of the patient; second, faulty diagnosis on the part of the physician, and, third, improper or insufficient treatment by either physicians or quacks.

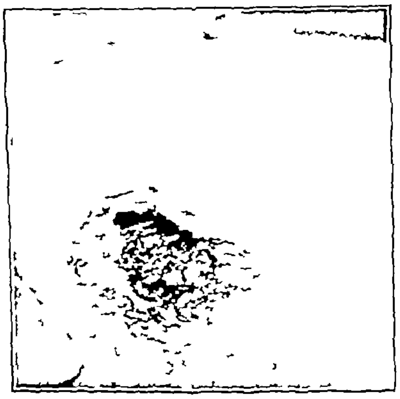

Fig. 1.—A prickle cell cancer of the cheek which was mistaken for a gumma.

In nine instances, patients had neglected themselves without seeking medical advice. One intelligent man had suffered from a cancer of the scalp for nineteen months, four patients had superficial growths of either the face or neck for over two years, one man had carcinoma of the lip for eight months, two had cancers of the face for six years, and one woman had five neoplasms of the face for seven years before seeking aid.

In this series there were six cases that had been wrongly diagnosed by the attending physicians.

One case of a basal cell growth developing in the nasolabial fold of a man aged 40 was called lupus vulgaris and treated on the expectant plan for some years.

In another instance the development of a fungous cuboidal cell neoplasm in a chronic varicose ulcer was unrecognized for three months.

The third case occurred in my own practice. A man aged 56 was referred to me by an excellent surgeon with a diagnosis of gumma of the cheek. The patient denied any venereal infection, and the Wassermann test was negative. However, he had pigmented scars over the upper third of both shins, and the tibiae were thickened and roughened. On the other cheek was a depressed scar which he stated resulted from an ulcer that remained unhealed for six months. The lesion for which he was referred was horseshoe shaped, at one end it was cleanly punched out for a considerable depth, and at the other end the skin overhung the base, which was composed of a fairly clean granulation tissue which was not friable. There was no history of bleeding. The edges were considerably indurated, but there were no cancer nodules or plugs, and there was a zone of inflammatory redness for over half an inch beyond them. In view of the other findings I considered that the condition was syphilitic, so at once administered a full dose of salvarsan, with the result that the ulcer at once stopped discharging, and apparently began to fill in from the base. At the end of two weeks another injection of salvarsan was administered, but this time no improvement took place, and it was very shortly evident that the lesion was spreading. Ten days after the last injection a hard pearly nodule appeared at the border of the ulcer and this was excised with the electric cautery, and stained. It disclosed typical prickle cell epithelioma.

In the fourth case a man presented himself with an indurated raised lesion about the size of a quarter on the edge of his tongue next a sharp tooth. The diagnosis of cancer was made and a radical operation advised but the patient was not satisfied and went to another city where he was put on injections of mercury. When he returned to Washington three months later the whole floor of the mouth and most of the submaxillary glands were involved.

The fifth case was one of retrotonsillar lymphosarcoma which was seen by a throat man and diagnosed as cold abscess despite a mass of adherent glands in the submaxillary region. This was lanced many times before the correct diagnosis was made.

The last instance was one of typical carcinoma of the tonsil which was first treated for quinsy. Later the patient received several injections of salvarsan and at the same time received one "massive dose" of Roentgen rays on the supposition that it might be malignant. Just what was the excuse for combining both methods of treatment would be rather interesting to know.

Twelve cases were either improperly or insufficiently treated after a correct diagnosis was made. In several instances more than one faulty method of treatment was employed.

Four cases had been treated by caustics.

One man with an early basal cell neoplasm of the nasolabial fold was treated by caustic potash, with the result that the lesion was spread

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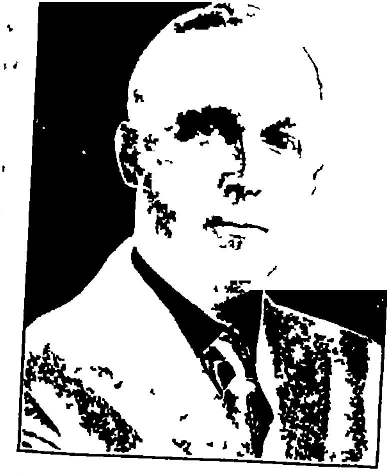

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SOME OF THE SECTION OFFICERS—1916

was probably just as well considering the results obtained In this case one would guess that the amount of radium used was too small, and simply acted as a stimulant

Still another patient with an extensive carcinoma of the floor of the mouth had been referred to the same physician, and radium had been applied to the trouble within the mouth with marked benefit, all of the lesion being at least healed over The glands of the neck, however, were treated by the external application of radium with the most disastrous results, for they were simply stimulated, and speedily ruptured through the skin, as well as invading the deep planes of the neck Here again a possible operable case was made inoperable

The last case was that of an out of town physician who had a superficial basal cell cancer of the left cheek which had been treated with carbon dioxid snow, partially excised, and then radiated, all without benefit Several treatments with radium at the hands of another exponent resulted in the temporary disappearance of the lesion, but each time it speedily reappeared After the last course a nodule, not more than 7 millimeters in diameter became at least 5 centimeters in diameter within two or three weeks

In view of the very bad way in which at least three of these cases were handled, one must naturally wonder whether some of the so-called radium experts are not on the same plane with those advertising various nostrums, both local and internal, for the cure of the dread malady, cancer If there is any difference it rests in the fact that they are more dangerous One must also receive with some skepticism the report of cures of deep malignancies and of uterine fibroids

CONCLUSIONS

1 The public is not yet sufficiently educated as to the importance of attending to superficial sores that will not heal

2 While it must be admitted that some cases of superficial malignancy are difficult to diagnose, still entirely too many of them are mistaken for other affections, even by experienced physicians All suspicious growths should be positively diagnosed at once

3 Many cases are not treated radically enough, it should always be remembered that insufficient treatment of whatever kind is the worst possible thing for a patient suffering from a malignant condition

4 Radium, even in large doses, and when administered by some of its greatest advocates, is by no means infallible in the superficial cases that it is stated to cure

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The Extinguishing of Small Gasoline Fires—As a result of a series of tests, the British Fire Preventive Committee has found that a mixture of sawdust and sodium bicarbonate, in the proportion of twelve of the former to ten of the latter, has advantages over sand and similar materials as an extinguishing medium for small gasoline fires The sawdust should be free from shavings or chips of wood, but does not require to be either dried or damped. The mixture is best kept in bins holding eight bushels In regard to the application of the mixture, the committee recommend that, in order to be thoroughly effective, it must be applied rapidly and in large quantities but systematically, so as to produce a curtain effect —*Lancet* London

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CONTRIBUTIONS TO THE MOVEMENTS OF THE EMPTY STOMACH

XXXIV A NOTE ON THE MOVEMENTS OF THE EMPTY STOMACH IN CERTAIN PATHOLOGIC STATES *

A B LUCKHARDT, M D
AND
W W HAMBURGER, M D
CHICAGO

Up to the present, with the exception of five papers,[1] none of the contributions of this series has dealt with the activity of the empty stomach under any but normal physiologic conditions It is perfectly plain, however, that the simple methods used in working out the essential features of the mechanism of hunger can be used equally as well in studying gastric motility under diverse pathologic conditions, especially when the general symptoms of the malady, disorder or disease refer directly or indirectly to pathologic states present in or involving the stomach We refer chiefly to such disorders and diseases as gastric or duodenal ulcer, carcinoma of the stomach with or without pyloric obstruction, and acute gastritis In short, the activity of the empty stomach might be profitably studied in conditions involving polyphagia on the one hand and anorexia on the other, as well as in those conditions which deal with pain referable for the most part to the epigastric region Such a study made by a person having ready access to the wealth of material found in the larger hospitals would not only be of value in corroborating or modifying the interpretation of experimental work obtained from dogs, but also might lead to results that would direct therapeutic measures in the proper direction in the disease under observation There is no question that the method employed would aid in the diagnosis and differential diagnosis of various gastric disorders

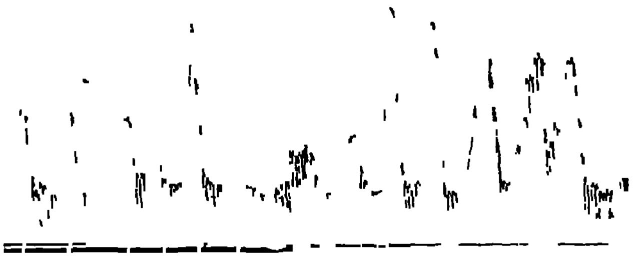

Fig 1—Record of the stomach contractions in Case 1 Patient pressed down key every time he noted an abdominal discomfort. As can be seen from the record, the abdominal discomfort coincided with the contractions of the empty stomach.

The present communication has a triple object

1 To point out to those interested in the clinical side of medicine the simplicity of the method, the small cost of the apparatus requisite for obtaining reliable and accurate results, and the value of the results obtained to the physiologist and to the clinician A

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* From the Physiological Laboratory of the University of Chicago and Michael Reese and Cook County Hospitals.

* Read before The Chicago Society of Internal Medicine, March 27 1916

[1] These five papers are
Luckhardt, A. B The Cause of the Polyphagia of Pancreatic Diabetes, Am Jour Physiol 1914 xxxiii 313
Carlson A J The Tonus and Hunger Contraction of the Empty Stomach During Parathyroid Tetany, Am. Jour Physiol 1913, xxxii 398.
Carlson A J A Study of the Mechanism of the Hunger Contraction of the Empty Stomach by Experiments on Dogs Am. Jour Physiol 1913, xxxii 369
Carlson A. J and Ginsburg H The Tonus and Contractions of the Empty Stomach in Infants with Congenital Pyloric Stenosis and Pylorospasm, *Am. Jour Physiol, 1916, xxxix,* 310
Elsesser, O J The Effect of Experimental Stenosis of the Pylorus on the Tonus and Contractions of the Empty Stomach Am Jour Physiol 1915, xxxix 303

limited experience has shown that the method is feasible for bedside work Aside from the kymograph, most of the apparatus is found in every hospital, and what is not there can be easily made, or bought for a few dollars Patience is a requisite of importance if anything of value is to result Sacrifice of some time is a prime essential

2 To put on record the result of an experiment on man beautifully corroborating the results obtained from dogs by one of us[2] during an investigation as to the cause of polyphagia of diabetes mellitus and pancreatic diabetes

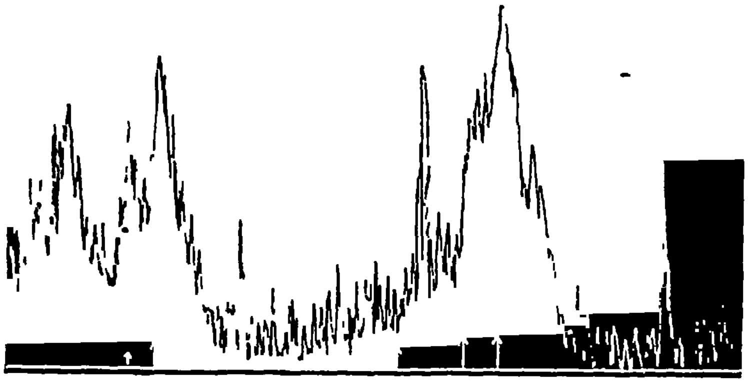

Fig 2—Record of the stomach contractions in Case 2 The various dots on the tracing indicated by an arrow represent occasions when the patient experienced abdominal discomfort the same in type as when he was hungry As can be seen from the tracing, the contractions are moderately powerful, resembling in type those obtained by Elsesser in dogs following experimental pyloric stenosis

3 To record the results obtained from the human stomach under several other pathologic conditions—results which check with our conceptions as to the nature and cause of hunger

We earnestly invite the reader to examine the simplicity of the method described in detail elsewhere,[3] and we pass, therefore, directly to the results obtained by us in three patients under the care of one of us (W W H)

REPORTS OF CASES

Case 1—M O, man, admitted to Michael Reese Hospital, Jan 29, 1914, complained of a slight loss of weight since the onset of his illness three or four years ago, which consisted of "pain in upper abdominal region" during the day (from 8 to 9 a m) and night He characterized the pain as a dull ache which did not come on till late after meals Aspiration seven hours after a motor meal was negative The average results of two Ewald test breakfasts were quantity, 190 c c, free acid, 37, total acid, 59 Weber test on gastric contents and feces was negative A diagnosis of simple hyperchlorhydria, possibly neurotic in origin, was made, although chronic gastric ulcer was also considered

Contractions of the empty stomach taken on several successive days were not more vigorous, nor were the periods more frequent than those taken from any normal person after the same period of abstention from food As Figure 1 indicates, he felt distinctly each contraction as the pain which caused him to apply to the hospital for treatment The fact remains that after the first day of observation (which, of course, as usual the patient considered a part of the gastric treatment) his vague sensations of discomfort gradually disappeared, and he left the hospital on the fourth day expressing himself grateful for what had been done for him The patient was, therefore, judged a neurasthenic who had so focused his attention on his gastro-intestinal tract that he picked out and interpreted the sensations arising from the normal hunger contractions as the symptoms of a pathologic condition His hunger contractions were normal, and his prompt "cure" was as significant to us as it was pleasing to him Possibly an increased excitability of the central nervous system was responsible for sensations of abdominal *pain* (hunger pangs) which the normal person would *at the most* note as a vague sensation in the epigastric region and which by habit he alleviated by taking food Especially so is this likely, since introspection and unconscious exaggeration of symptoms is a favorite occupation of the neurasthenic If, then, the condition is chiefly psychic, our "treatment" might exert a favorable influence on such a patient and lead to the "cure" as described in this paper

Case 2—T K, an aged negro in Cook County Hospital afflicted with a carcinoma of the stomach without as yet grave signs of a pyloric obstruction,[4] had a tumor mass in the abdomen to the right of the median line the size of an orange, together with a gland in the supraclavicular region the size of an English walnut Two Ewald breakfasts consisting of toast and 6 ounces of tea were analyzed with the following results

First meal aspirated at end of one and a half hours, quantity, 310 c c, free acid, 18, total acid, 41

Second meal aspirated at end of hour, quantity, 120, free acid, 10, total acid, 36

The patient was emaciated, but took a lively interest in food, complaining on several occasions that the restricted hospital diet (soft diet) did not meet his hunger or appetite requirements The contractions of his empty stomach taken about eighteen hours after his last meal were fairly powerful, as can be seen from Figure 2 Since such or similar contractions in the normal result in the sensation of hunger, it is important to add that he felt during the contractions an abdominal discomfort the same as when he experienced hunger Feb 23, 1914, his empty stomach showed no signs of activity during about three hours' continuous observation (Fig 3) This deviation from the normal, however, was soon explained by an attendant who informed us that on the previous evening friends had smuggled into the hospital a bottle of wine which he drank and some cake which he munched under cover of his blankets An acute gastritis developed soon after this indiscretion, and he spent the early part of the evening retching and vomiting No doubt the acute gastritis was responsible for the absence of the usual hunger contractions and the presence of a perfectly atonic stomach Parenthetically we might note that an acute gastritis induced in a dog by giving him whisky and alcohol through a gastrostomy opening led to an atonic stomach and a cessation of the normal hunger contractions for a period of forty-eight hours But the complete results of this and similar experiments will be reported more fully at some future date Experimental work on the action of certain drugs in allaying or increasing hunger contractions has been begun, but not advanced enough for even a preliminary report

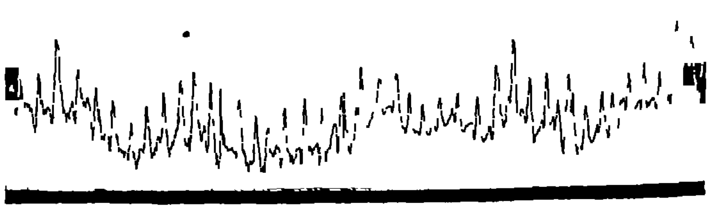

Fig 3—Record of the stomach contractions in Case 2 during an attack of acute gastritis Slight tonus variations are in evidence During the greater part of the period of observation the records show a simple respiratory rhythm

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[2] Luckhardt, A B (Footnote 1)

[3] Carlson, A J A Study of the Mechanism of the Hunger Contractions of the Empty Stomach by Experiments on Dogs, Am Jour Physiol, 1913, xxxii, 369, The Hunger Contractions of the Empty Stomach During Prolonged Starvation (Man, Dog), Am Jour Physiol, 1914, xxxiii, 95

[4] Subsequent necropsy (March 7, 1914) confirmed the clinical diagnosis

Case 3—The most interesting results were obtained from C X man, aged 29, admitted to Cook County Hospital, Dec 18, 1913, and assigned to the care of one of us (W W H) Two weeks previously he had been at Mercy Hospital (Chicago) for excessive thirst, general weakness, and frequent urination He had been sick seven weeks, and during that time had lost 20 pounds He was hungry all the time and had been eating large amounts of food since leaving Mercy Hospital He was in the last stages of a severe diabetes mellitus In spite of a restricted carbohydrate and large doses of sodium bicarbonate, he was growing progressively weaker His ketonuria was marked, and his dextrose to nitrogen ratio was 1 35

Feb 11, 1914 (first trial), the empty stomach possessed good tone and showed moderate hunger contractions Five days later (Feb 16, 1914) the empty stomach showed two moderate and one powerful period of hunger contractions in less than three hours This is rather unusual, for after a twelve hours' fast, hunger periods recur about every two hours During one of the three periods mentioned above, all but a few cubic centimeters of the chloroform was expelled from the manometer, so that the graphic record is not complete The fact is significant that the patient became restless and irritable toward the end of the experiment and continually asked for food Because of this increasing restlessness and irritability the experiment was discontinued for obvious reasons

The patient went into diabetic coma five days later and died the following evening (Feb 22, 1914)

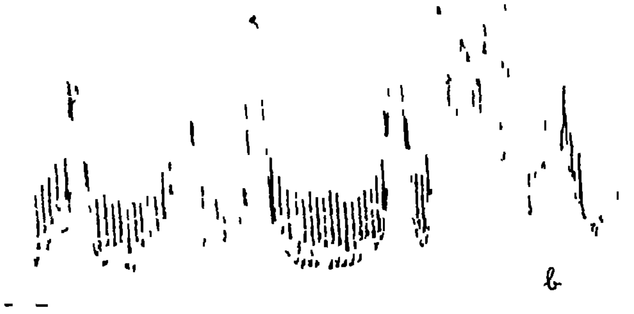

Fig 4—Record of the stomach contractions in Case 3 As can be seen the period ends in tetany at the close of which (*b*) a powerful contraction forced a considerable amount of chloroform out of the manometer

It is regretted that other duties prevented us from recording observations between February 16 and February 21 Our experiments surely indicate that the contractions of the empty stomach are responsible for the sensations of hunger experienced by diabetics We do not expect to find that other patients so near death from other causes (save in special easily explainable instances) would speak of eating as often and as freely and exhibit hunger contractions of the same severe type as shown by this patient

Incomplete as the results are, they nevertheless confirm the work on animals suffering from a fatal pancreatic diabetes when the polyphagia was attributed to the marked hunger contractions resulting from the inanition which is so prominent a feature of the disease[1] For it was shown[5] that the blood of an animal showing the polyphagia of pancreatic diabetes similar to the blood of a starved animal possessed the property of increasing the vigor of stomach contractions when such blood was injected intravenously into a normal animal

SUMMARY

The method employed in studying the movements of the normal empty stomach (hunger contractions) is feasible for use in the study of movements of the stomach in pathologic states which point either directly or indirectly to an involvement of the stomach Patients experienced no difficulty in swallowing the balloon, the apparatus necessary is simple and inexpensive, the results obtained are of great interest and value both to the clinician and physiologist

The results obtained so far warrant the following statements

1 The hunger contractions obtained from a neurasthenic conformed to the normal, though interpreted by him as painful They were neither more vigorous nor more frequently repeated than those of any normal person His prompt 'cure" justified our conclusion that we were dealing with a patient not suffering from any serious organic gastric disorder

2 Hunger contractions were obtained in a case of cancer of the stomach without marked pyloric obstruction The contractions were moderately powerful The patient was quite emaciated (in a state of inanition), but took interest in food and experienced hunger during the contractions

3 When, however, an acute gastritis is brought on by dietary indiscretions, there results a cessation of contractions of the empty stomach, and this is accompanied subjectively by a lack of interest in food and an absence of hunger (anorexia)

4 Most cachectic states are accompanied by an anorexia Further work will no doubt show that this is due to the absence of well defined hunger contractions The cachexia of diabetes mellitus, however, is accompanied by a more or less well marked polyphagia We find that the latter results from frequent and vigorous contractions of the empty stomach (hunger contractions) which are responsible for the polyphagia exhibited by patients suffering with this disease

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[5] Luckhardt A B and Carlson A J On the Chemical Control of the Gastric Hunger Mechanism Am Jour Physiol 1914 xxxvi 37

CHYLOUS ASCITES AND CHYLOTHORAX

DUE TO CARCINOMA OF THE STOMACH

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AND
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Chylous ascites—the occurrence of ascitic fluid which is of a milky character, and the color of which is due to the presence of chyle or of fat globules (pseudochylous)—is a sufficiently rare condition to make a case of extreme interest, both clinically and physiologically Several cases in which the condition resulted from a traumatic rupture of the receptaculum chyli have been studied by physiologists, who, assuming that they were dealing with pure chyle, have been interested in watching the effect of various diets on the composition of the chyle

In 1910 Wallis and Scholberg[1] reported three cases and reviewed the literature, collecting reports of 173 cases, but they missed the cases reported by Hall and Morton,[2] Nichols,[3] Batty Shaw[4] and Edwards[5]

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[1] Wallis and Scholberg Quart Jour Med iii 301 iv 153
[2] Hall and Morton Northwestern Univ Bull June 1910
[3] Nichols Med News New York Nov 11 1905
[4] Shaw H B Jour Path and Bacteriol 1900 vi 339
[5] Edwards Practice of Medicine 1909

Since their article, cases have been reported by Gandin,[6] Calwell,[7] Marrack,[8] Lediard,[9] Collins,[10] and Huber and Silver [11]

The article by Wallis and Scholberg is quite exhaustive, giving an abstract of all the 173 cases of chylous and chyliform ascites and the sixty cases of chylothorax, with complete analyses of the fluid obtained in their own cases and an extended discussion of the conditions

In the cases abstracted by Wallis and Scholberg, there are seventeen in which the etiology is given as carcinoma of the stomach Of these, in three — the cases of Zawadski (1891), of Lydhecker (1893) and of Menetier and Gauchler (1902) — there also was chylous fluid in the thorax To these three we add here a fourth

REPORT OF CASE

History—W T B, man, aged 46 horse buyer, Anglo-Saxon, referred by Dr Riley of Benedict, Kan, had a father, mother and one brother living and well No brothers or sisters were dead He possibly had a syphilitic infection fifteen or twenty years before Some antisyphilitic treatment was carried on for a year, but not vigorously He used to use whisky too much but took a cure about five years before and had not used it since He had never been in tropical countries, other than Texas, where he has been within two years

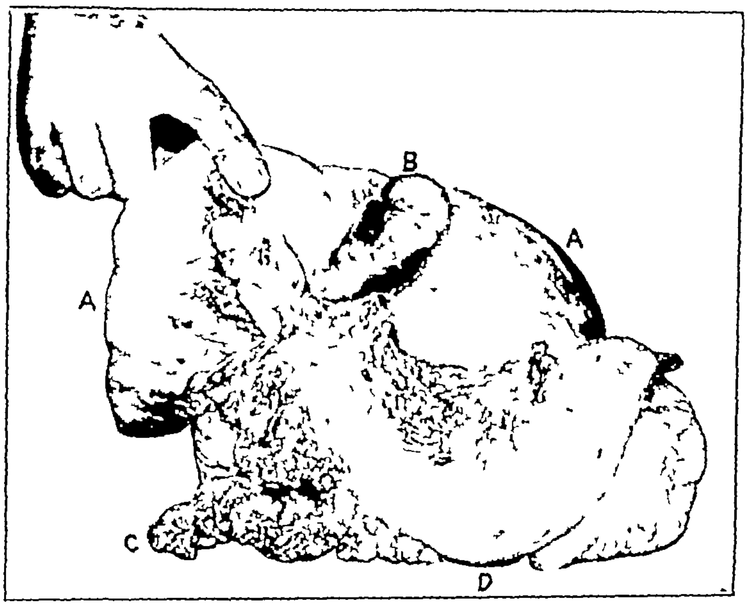

Fig 1—Gross specimen *A A* liver *B* gallbladder *C*, mesentery of the intestine filled with glands, *D* stomach, with tumor in the pyloric region

He felt well up to six months before examination (April 16, 1915) The onset of his illness was sudden One day in the afternoon he felt dizzy and vomited He did not go to bed, but was weak and dizzy and continued to feel much the same way for two months He vomited three or four times in that period He has never vomited blood In the last three months he has been troubled with indigestion, pain after meals, belching and bloating The bowels are constipated

March 27, 1915, the abdomen began to swell very suddenly, and in a few days was enormously distended It was tapped, April 1, and about a gallon of milky fluid was removed

April 8, it was again tapped, and 1½ gallons of ascitic fluid of the same character were removed

An edema of the scrotum and penis was observed at about the time of the appearance of the ascites

April 16, he was removed to the Swedish Hospital from his home in Benedict, Kan

Physical Examination—At this time the temperature was 99, pulse, 110, blood pressure, 135 Urine specific gravity, 1 020, acid, a trace of albumin, no sugar, no casts Blood hemoglobin, 105, reds, 4,000,000, whites, 17,000 Differential count of whites showed normal relationship The Wassermann reaction was negative

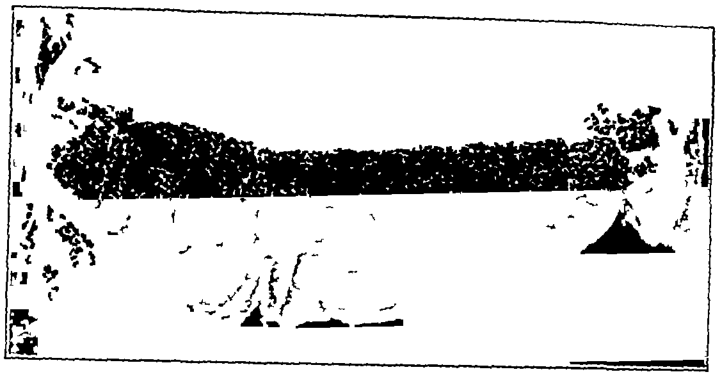

Fig 2—Duodenum, showing lacteal vessels engorged and lumpy in appearance over its surface

The patient looked old for his age His hair was white The veins on the cheeks were dilated Heart The apex was just outside the nipple line There were no murmurs A diffuse and soft swelling was on the left side of the neck just below the clavicle The lungs were clear with normal vesicular murmur everywhere except in back of left chest, where there was dulness with no breath sounds and evidence of fluid There was edema of the scrotum and penis, and enlargement of the glands in both inguinal regions The skin was slightly edematous everywhere, not more so in the legs than over the chest and in the skin of the abdomen The abdomen was enlarged, with evidences of fluid No filariae were found in the blood

Course—April 17, the abdomen was tapped, and over a gallon of milky fluid withdrawn The chest was aspirated at the same time, three and a half quarts being removed This chest fluid was clear straw colored The fluid removed from the abdomen was milky in appearance, with a tinge of pink It contained 1 9 per cent of albumin and fat, and did not react to Fehling's solution Microscopically it showed small fat globules, and small specks in constant atomic motion Leukocytes and erythrocytes were numerous

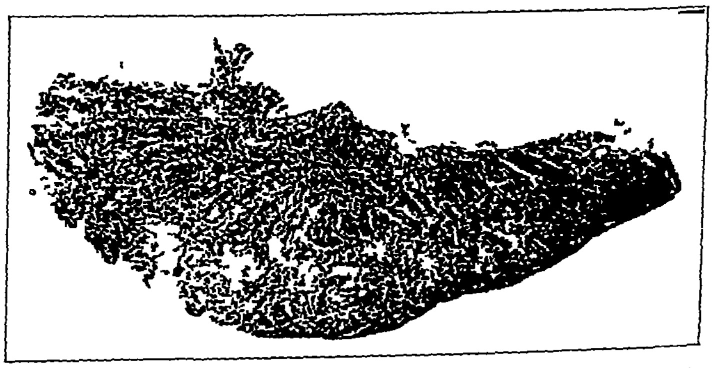

Fig 3—Small intestine, near end of jejunum, lymphatic vessels are stained with silver nitrate, note thickness of mesentery

April 23, the abdomen and the chest were again tapped Chylous fluid was found this time in the chest as well as the abdomen A swelling in the left side of the neck the size of a small orange was observed It receded in size when fluid from the abdomen was removed After the fluid had been removed, a tumor extending across the upper abdomen, above the umbilicus and more marked on the left side, could be outlined on palpation It was recorded that it felt like a tumor of the transverse colon The liver was two fingers below the costal arch

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[6] Gandin Ergebn d inn Med u Kinderh, 1913, xii, 219

[7] Calwell Brit Med Jour, Feb 21, 1914

[8] Marrack Quart. Jour Med, 1912, vi, 462

[9] Lediard Clin Jour, 1914, xliii, No 9

[10] Collins Ann Surg, 1913, lviii No 4

[11] Huber, Francis, and Silver, H M A Case of Acute Chylous Ascites (Non Fatty, Pseudochylous, Latescent or Milky Type) in a Boy Eight Years Old, Am Jour Dis Child, July, 1914, p 50

May 1, the abdomen and the chest were tapped A large quantity of milky fluid was obtained from each

May 12, the abdomen was tapped, 1½ gallons of chylous fluid were removed

May 13, the patient died

Necropsy.—A partial postmortem examination was made May 13, at 8 30 p m. The body was that of a middle-aged man There was no rigor mortis There was edema of the penis and scrotum There was a swelling on the left side of the neck When the abdomen was opened, about 3 quarts of milky fluid escaped The intestines were distended and covered with a lymphatic exudate The cecum and appendix were enormously distended Small lymphatic channels over the surface of the intestine were greatly distended All the glands of the mesentery were enlarged The entire mesentery was a thick mass of glands which were soft in consistency

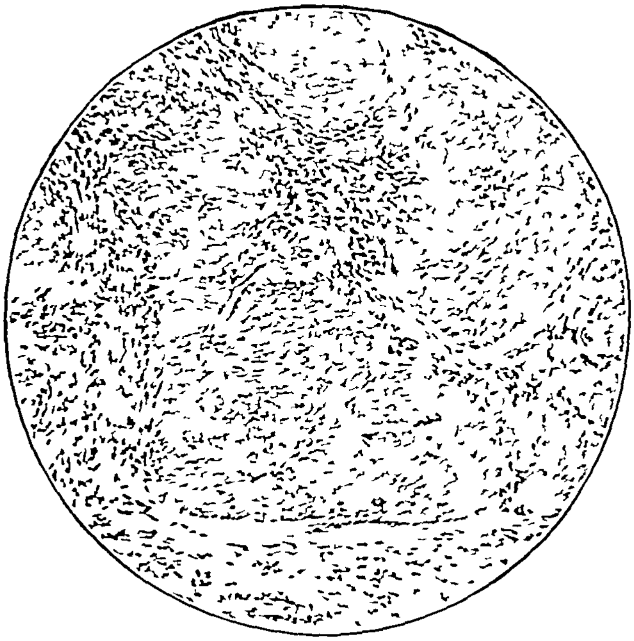

Fig 4.—Section of tumor in the stomach

The liver was enlarged and edematous The gallbladder was large There were no gallstones

A tumor was present along the lesser curvature of the stomach extending from the duodenum to well within the pylorus The glands of the gastrohepatic mesentery were enlarged. No growth was found in the rectum

Milky fluid was found in the left side of the chest. The lungs everywhere were clear and crepitant There was no enlargement in the mediastinum. There was no aneurysm The thoracic duct could not be located. The entrance of the thoracic duct into the large veins could not be made out

The entire small intestine stomach liver and mesentery with the covering of the abdominal aorta were removed in one piece

COMMENT

The case was interesting The shifting of symptoms from day to day was alone sufficient to make it such, and besides, the diagnosis was always in doubt, ranging from filariasis to thoracic aneurysm The case of Nichols,[3] of which we had a report, and in which the ascites was due to cirrhosis of the liver, influenced us to cling to that diagnosis most constantly in view of our patient's alcoholic history After he had been a week in the hospital the tumor, felt in the upper abdomen, made the diagnosis of carcinosis of the abdomen seem very reasonable

Of especial interest was the swelling on the left side of the neck just above the clavicle Was this due to an enlarged or tense thoracic duct? It was noticed that it receded in size after tappings of the abdomen or chest It extended gradually up the neck, day by day, between tappings, until it reached half way up to the sternomastoid muscle

Was there an obstruction of the receptaculum chyli, either a thrombus or a metastatic plug? We are unable to state The specimen removed from the body was taken with an especial view to a dissection of the great lymphatic duct, but while it was attempted no part of it was found The demonstration of the receptaculum chyli or of the thoracic duct is one of extreme difficulty, and rarely satisfies any one but the dissector himself After attempting it in this case we are regretfully inclined to take with a grain of salt the very glib reports of its condition made by other reporters of cases of chylous ascites

As we did not find the receptaculum in the abdomen or the thoracic duct in the thorax, we feel inclined to believe that they were not affected in this case, as a metastasis of the tumor would have been seen in either of them We believe that the chyle escaped into the abdomen through the small lymph vessels of the intestine and mesentery We know, in support of this belief, that they were all very much dilated, that the lymph nodes all through the mesentery were enlarged, and that metastases were found in the small lymph vessels of the intestine and in the nodes from every portion of the mesentery (Figs 2, 3, 4 and 5)

The fluid removed from the abdomen and the chest gave the evidence of being true chyle, it did not putrefy on standing, it did not clot, and it contained no macroscopic particles of fat A great deal is made of the differences between chylous and pseudochylous and chyliform fluids by other authors Huber and Silver make the following distinctions

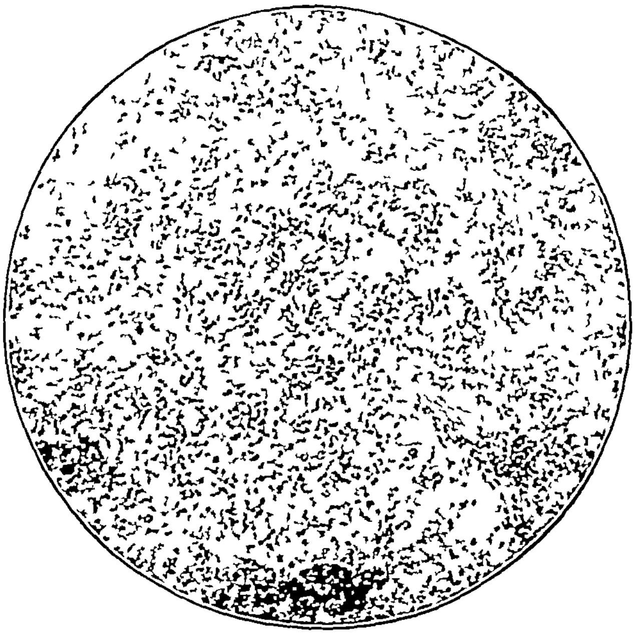

Fig 5.—Section of mesenteric gland showing metastasis

1 True chylous effusion is due to the presence of chyle

2 Chyliform or fatty, though resembling the first, owes its milky appearance to emulsified fat, the result of a fatty degeneration of cellular elements

3 In the third variety "the opalescence is not due to the presence of fatty emulsion but is caused by the

presence of opalescent substances, the exact nature of which is still undetermined "

Wallis and Scholberg have a much simpler conception of the different nature of the fluids "Chylous effusions would include, as before, those due to trauma or to the escape of chyle in diseases affecting the lacteal and lymphatic systems " Chyliform are all other kinds

CASES IN THE LITERATURE

The article by Wallis and Scholberg, as we have stated above, is the most complete monograph in English on the subject We have not attempted to confirm their references The cases which we have found in the literature not included in their article, or reported since, are as follows

Hall and Morton[2] report a case due to trauma, a wagon passed over the abdomen of a young boy Many tappings were made, and true chyle obtained The case was studied chemically by Hall in relation to diets

Nichols[3] reports a case in a man, aged 74, due to cirrhosis of the liver Two tappings were made, and 5,700 and 6,200 c c of fluid, respectively, obtained The man died, and there was a necropsy

Calwell[7] reports a case due to nephritis (?) The patient was tapped once, and 3 pints were drawn off

Marrack[8] reports two cases, one due to appendicitis and one to nephritis

Lediard[9] reports four cases, one due to tubercular peritonitis, one to Hodgkin's disease, one to heart and liver disease, and one to a malignant cyst from the pelvis

Collins[10] reports a case due to trauma

Huber and Silver[11] report a case in a child, aged 8, due to no determinable cause An operation was performed and an opportunity given to examine the intestines, when the lacteal vessels were seen engorged, as in our case A subcutaneous drainage of the peritoneum resulted in a cure They quote Gandin, a reference to which we do not have access

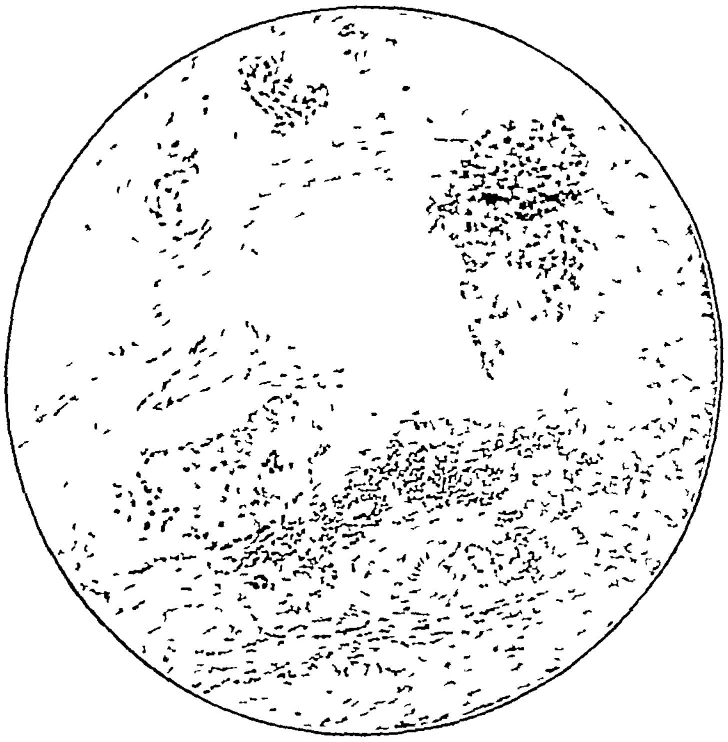

Fig 6 —Section of intestinal wall, showing metastatic plugs in the lymph channels

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Lead Poisoning in Pottery Trades—The causes of lead poisoning in the pottery trades are the lead ingredients, of which the glazes are partly composed The most dangerous process is that of mixing the glaze, applying it to the ware and then removing the excess of the glaze from the ware, handling the ware while the glaze is still wet, decorating and painting the ware and also sweeping the rooms in which the glaze has been handled Much of the glaze is without lead and is harmless, but in a large percentage of the various pottery wares, lead glazes are used In only a few of the factories investigated by Dr Hamilton did the percentage of lead exceed 20 In certain tile works, the percentage in the glaze ranges from 40 to 60 The workmen, besides being exposed to lead poisoning, also inhale much mineral dust and suffer from the effect of great heat in the firing of the enamels—C M Price, *Modern Factory*

DEVELOPMENT OF THE STATE HOSPITAL AT KANKAKEE (1880-1890) *

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WAUWATOSA, WIS

In the latter half of the nineteenth century, many problems connected with the public care of the insane presented themselves for solution which developed conflicting views Some of these questions were the advisability of separate provision for the acute and chronic classes, the extent to which mechanical restraint was necessary or admissible, the need of establishing laboratories for psychopathologic research, of instituting training schools for attendants, of broadening and diversifying industries among the inmates and of increasing their privileges, and even of maintaining in some instances "open" instead of locked doors Among all the questions, however, that which for a time took precedence of others concerned the introduction of a new type and style of building—the substitution of modern "segregated" or "detached" buildings, domestic in style, for the antiquated "congregate" structures previously in universal use This paper is intended, among other things, to describe the new departure in architecture which was ushered in at Kankakee between 1880 and 1890

Today, when this transformation has long been *un fait accompli*, it seems sufficiently simple, but in its inception it involved much controversy and debate which was at times tinged with acrimony

After the close of the Civil War, a great mass of insane pauperism seemed to become suddenly a public burden This incubus had been growing all along, but the people did not become aware of it until after the war and its all-absorbing issues had been disposed of Then the necessity for asylums became apparent, and every state in the Union, in its turn, found itself engaged in a struggle with this unwelcome and ever increasing burden In the several states one asylum after another was provided, but in nearly every instance, long before the doors were open, more than enough hapless defectives had accumulated in the almshouses and jails of the state to fill it to its utmost capacity A grim struggle with this increasing mass of human driftwood has been constantly in progress up to the present time The struggle seems absurdly unequal, for the forces of the state continually lag behind, balking at the enormous expenditures involved The situation may be likened to a "forlorn hope" assailing an inaccessible height It might be compared to the cutting of the Gaillard channel through the Culebra Mountain on the Isthmus of Panama each time when a new opening has been cleared, another inert mass slowly accumulates, obstructing the path of progress Vast treasure has gone into this great engineering enterprise, but the millions which have been poured into it are insignificant compared with the sums[1] which have been and will be expended in the conflict which civilization wages with the masses of defectives — its useless by-products, useless except as a test of the humanity and efficiency of our civilization We cannot doubt the ultimate victory of soundness and reason over disease and disorder, though at times conscious of anxiety and even alarm over the issue

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* This article is a revision of the writer's history of Kankakee, one of the forthcoming series of histories of 'The Institutional Care of the Insane in the United States and Canada" to be published this year by the American Medico Psychological Association, under the editorship of Dr Henry M Hurd Volume I has already appeared from the Johns Hopkins Press

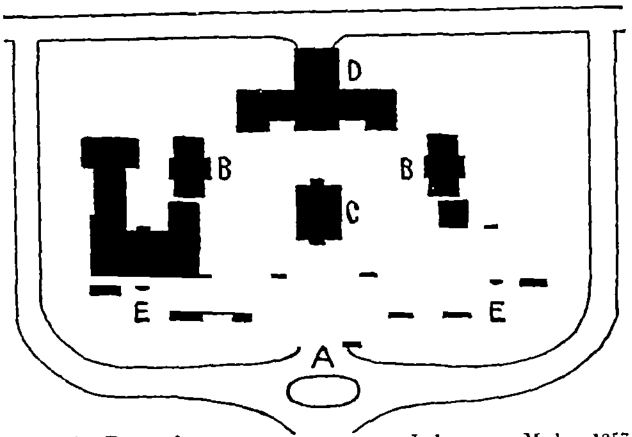

Fig 1 —Type of congregate institution Kalamazoo Mich 1857 scale, 100 feet equal 1 inch *A* administration *B B* infirmary *C* chapel *D* service buildings *E E* wards.

The institutions for the insane constructed in the United States prior to 1880 were always practically of one type, a massive, many-storied building with dominant central structure and wings extending far to right and left in sections and cross-sections wherein were gathered the hundreds of these incapables who fell to the grudging care of the state This "central building with wings" was accepted as a sole and universal model up to the last quarter of the nineteenth century Whenever and wherever a new insane hospital was wanted, it seemed to be a matter of course that an abject copy would be made of some one or another of the state hospitals already existing This type of building, the congregate hospital, apparently first modeled after a medieval monastery, and later, though improved from time to time in many details, still in arrangement and design retaining an institutional rather than a houselike or homelike character, remained the example to be followed under all circumstances It reached its highest development in the so-called 'Kirkbride" plan, named after the late eminent Dr Thomas Kirkbride of the Pennsylvania Hospital This uniformity of building seemed to imply uniformity in condition of the inmates, and evidently they "all looked alike" to the legislative eye All were considered dangerous, their principal need being confinement in a strong, secure building It was long before the idea entered the minds of the statesmen, who controlled the appropriations, that the insane were possessed of many human attributes, that the dangerous ones were the rare exceptions, and that dangerous or vicious conditions were often due to the evil environment provided by the state itself

Figures 1 and 2 show the two types of buildings As provision for the insane was more and more demanded, the efficiency and appropriateness of the congregate style of building came more and more into question The questioners were not the people identified with institutions, but, as is so often the case, outsiders were the critics One criticism of the prevailing style of building was its cost It required a minimum of a thousand dollars, and in some institutions three or four thousand dollars had been expended for every patient accommodated — enough to provide a house and lot for an ordinary citizen Other criticisms began to be heard It was claimed that a "sad idleness" instead of employment and diversion which would be both practicable and beneficial prevailed, and also that an unnecessary amount of mechanical restraint and confinement was used Visitors to institutions in other countries brought back reports of large industries, "open doors," abolishment of mechanical restraint and a more homelike atmosphere, especially was the colony for the insane at Gheel, Belgium, brought up as an example, in which an insane population of over 2,000 was mostly quartered in the homes of the peasantry All these discussions led to advocacy on the part of the public of "cottages" rather than "caravansaries" for the insane At the same time, those identified with the institutions maintained a strict adherence to traditional lines The advocacy of the so-called "cottage system" was "unorthodox," "impracticable," "theoretical" Discussion went on for years, and while changes were advocated from the outside, all was complacency within The ancient monastic structure was well intrenched, and the assaults of the reformers made little impression

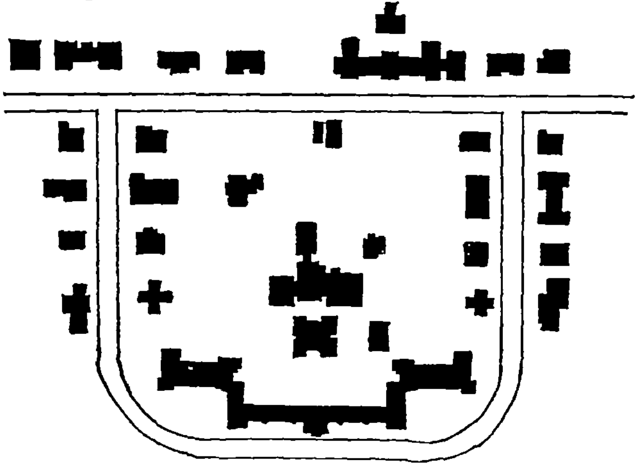

Fig 2 —Type of segregate institution Kankakee State Hospital 1880-1890 scale 500 feet equal 1 inch village plan first departure from congregate type The small building in the congregate style was retained in avoidance of too radical a change.

In the meantime, the demands for additional institutions had to be met, and various expedients were discussed The policy of separate and cheaper establishments for incurable cases was frequently proposed, and although this policy was ultimately discredited, yet in a notable instance it was adopted The Willard Asylum for Chronic Insane was established at Ovid, N Y This institution developed rapidly, reaching in the end a capacity of more than 2,000 inmates It was at first constructed in the well known congregate style, but a step in advance was secured in diminishing the cost of construction Under the admirable management of Dr John B Chapin, these buildings were constructed at an expense per capita of about $500 — less than half the amount that had previously been considered necessary

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[1] For the support of 187 454 insane patients in public institutions of the United States the sum of $32 804 450 was expended in 1910 and each successive year shows an increase in the number of patients and in the expenditures involved (the latest available census figures)

Turning now to the inception of the hospital at Kankakee, we note that the Board of State Commissioners of Public Charities of Illinois, and especially Mr Wines, its secretary, had studied the question of buildings for the insane This board had pondered over these problems from its first assumption of office in 1869 Its members were aware of the criticisms which were rife in the community, and they had invited, by correspondence and conference, expressions from many men of expertness and experience in this field In that first year (1869) a meeting for discussion of this subject occurred at Chicago, at which Dr Andrew McFarland, then superintendent of the state hospital at Jacksonville, Ill, said

> The present system of architectural construction adapts the entire institution to the demands of its smallest and worst class, while for the great majority all these appliances are utterly unnecessary We need more of the element of home life I would not abolish the old form of institution The two systems may exist side by side I would have the central hospital in the foreground At a little distance I would have a group not of cottages, they should be houses of two stories in height Under this system facility of extension would be great Classification would be more complete

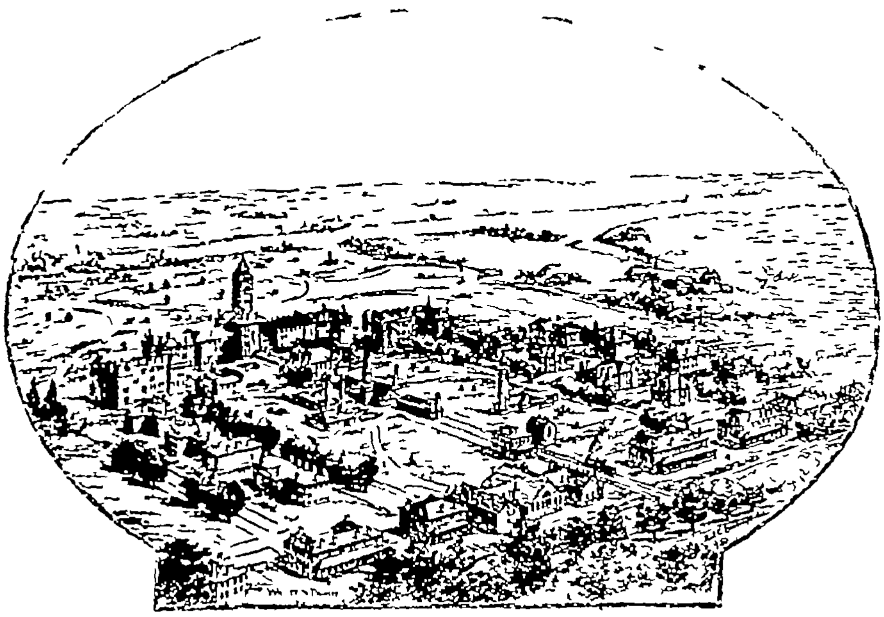

Fig 3 —Bird's eye view of Illinois Eastern Hospital for the Insane, Kankakee as it appeared in 1887, with a capacity of 1 600 patients The material of all buildings is either stone or brick, and the main building is fireproof throughout The total cost of the institution, which was begun in 1878, to 1887, for every expenditure except running expense, amounted to an average for each patient of $754 50 The average cost per patient on construction account alone (excluding cost of furniture, land, etc) was $590 18, cost of cottages under $500

At a later date, in the report of the state board for 1892, referring to the foregoing paragraph, Mr Wines, in stating the case for detached construction, said

> To Dr McFarland, therefore, more than to any other man, belongs the credit of planting the germ which has developed into the hospital at Kankakee His words passed unnoticed at the time, but they made a deep impression upon the state board, and especially upon its secretary, Mr Wines, in whose brain they ultimately took practical shape

The opinion arrived at by Mr Wines as a principle for development of future institutions was thus expressed

> The classification demanded (for the insane as a whole) was not in separate wards of one building nor in separate institutions (for acute and chronic), but in separate or detached buildings for the care of both acute and chronic cases in a single institution, under a single head

In noting the further steps in the genesis of detached construction, the fact is to be emphasized that when the appropriation was made for the new institution at Kankakee in 1877, the law was so worded as to make it *obligatory* for the trustees of the new institution to secure the approval of the board of charities to any plan they might adopt This practically made Mr Wines, the secretary of the board of commissioners of public charities, arbiter of the building plans, and here, for fuller elucidation, a few words must be given to Mr Wines, as he was a determining factor in the change of type in buildings for the insane

Frederick Howard Wines, formerly a Presbyterian clergyman at the state capital, and previously, during the Civil War, a chaplain in a Missouri regiment on the Union side, had become secretary of the state board of commissioners of public charities at the request of Governor John M Palmer It was a case of the "office seeking the man " Mr Wines was a brilliant writer and speaker, a man of broad sympathies and humanitarian motives He was also possessed of a grasp of economic principles and administrative details unusual for a clergyman Having familiarized himself with the subject of further provision for the insane, he had become an advocate of greater freedom and elasticity in constructive and administrative matters In 1878 he had been delegated to attend the world's prison congress at Stockholm Thus, while in Europe he had been able to study institutions and had become convinced of the practicability of the detached wards He submitted to the legislature on his return a report which resulted in the first appropriation for detached buildings at Kankakee, and the sum of $30,000 was appropriated for "cottages" to accommodate there 100 patients in three separate buildings Thus legislative approval was given for the first time to the detached ward idea

There was even yet a certain measure of apprehension in the mind of Mr Wines, as is shown by the following language in his report for 1882

> The foundation of this experiment was laid in fear and trembling The "cottage-system" had been a topic of discussion for many years, but the sentiment of the medical profession engaged in the care of the insane was adverse to it

The tradition of the congregate style of building had been so strong that in 1877 the board of trustees of the Kankakee Hospital in a joint conference with the board of public charities had decided that the first building erected must be the stereotyped central building with wings The board was unwilling to take the chance of so radical a departure from long usage as would be involved in total detachment Thus the leading strings of custom prevented progress at first, but the successive additions, in 1881, of three buildings for 100

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patients, in 1883 of ten buildings for 1,000 patients, and in 1885 and 1887 of further extensions were all in the detached style, so that in 1893, more than 1,600 patients were domesticated under the village or cottage plan of construction,[3] and the successful working of these wards through all the subsequent years vindicated the claims that their originators had made for them

NONPARTISAN CONTROL

It is worthy of note here that the unusual conditions as to party control prevailing in the legislature at the time the institution was organized led to the appointment by the governor of a "nonpartisan" board of trustees, with two Republicans and one Democrat on this board of three members In the light of subsequent events, this feature may be regarded as fortunate, since partly in consequence of the minority representation and partly by reason of the disposition of all three members of the board to ignore partisan politics and to hold the superintendent alone responsible, civil service principles were consistently maintained during the fourteen years' service of the first superintendent[4] This fact had an important bearing on the development of the institution, as it enabled the administration to be free from all political interference

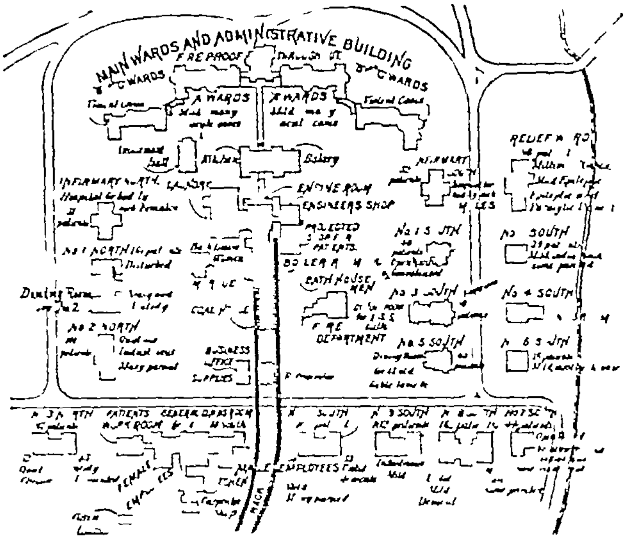

Fig 4—Ground plan of Illinois Eastern Hospital for the Insane Kankakee.

REDUCTION IN COST

The cost of detached wards at Kankakee did not exceed $500 per capita Up to the time when these buildings were erected, the congregate buildings universally in use had cost a minimum of $1,000 per capita A reduction in cost of about 50 per cent was thus effected, so that the amount formerly necessary for one patient would now provide for two This was better than "two blades of grass where one grew before"

INCREASE OF INDUSTRY

The percentage of patients employed rose from 42 per cent in the first biennial period to 57 per cent in 1888, 68 per cent in 1890, and 73 per cent in the last period of my superintendency (1892) Space will not admit of details concerning the great variety of trades and handicrafts which were introduced[5]

TRAINING SCHOOL FOR ATTENDANTS

In 1886 a training school for attendants was organized At that time there were but four schools in existence in institutions for the insane in the United States Up to March 31, 1893, 130 attendants had graduated, sixty-four men and sixty-six women Sixty were still in the employ of the hospital Eleven men and six women graduates were also employed in other capacities, having been promoted for merit[6]

DR ADOLF MEYER

An interesting fact in the history of Kankakee is the service there of Dr Adolf Meyer as pathologist from 1893 to 1895 Dr Meyer began at Kankakee a distinguished career, culminating in the professorship of psychiatry at the Johns Hopkins Medical School and the directorship of the Henry Phipps Psychiatric Clinic He secured during 1893 the purchase from the German government exhibit at Chicago of valuable apparatus He inaugurated staff meetings and a course of instruction for the medical staff, also greatly improved the case-taking system

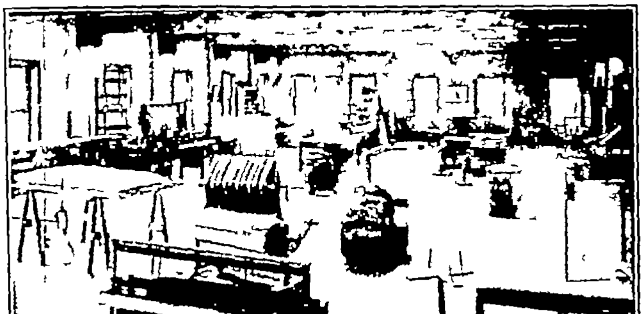

Fig. 5—Interior of men's workshop

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[3] As showing the somewhat far reaching influence of the new departure at Kankakee the following facts may be noted The governors of Ohio and Indiana accompanied by a state commission and an architect or engineer each visited and inspected the detached wards at Kankakee in 1883 Later the institutions at Toledo (capacity 1 000) at Logansport (capacity 380) and at Richmond (capacity 400) all on the detached ward plan were constructed North Dakota employed Major Willett architect at Kankakee and in 1885 had 160 patients in three detached wards New York constructed a new hospital at Ogdensburg built in detached blocks in 1890 capacity when complete 1,500 patients. Ontario at Mimico near Toronto in 1890 had 240 patients in detached wards. New York City in 1889 had 360 patients in detached wards at Central Islip Any one interested in the views on building plans held at that period can find documents and discussions in the files of the American Journal of Insanity and in the 'Propositions and Resolutions collected and published in 1876 by the Association of Superintendents also the reports of the Board of Public Charities of New York Massachusetts, Pennsylvania and Illinois (the only state boards of charities in existence up to 1869) The report for 1884 of the Illinois Board of Public Charities, Chapter III p 65 has a very full summary of the subject from the pen of Secretary Wines.

[4] Having been the first superintendent the writer well remembers one of his first official acts—the securing of a carpenter After thorough inquiry the man found by all odds best qualified was selected but when later the appointment became known to the local boss of the political machine a period of consternation ensued and the superintendent discovered that he had appointed a Democrat instead of a Republican carpenter In local political circles this was felt to be a serious blunder There was no interference with the appointment however and that same good craftsman remained in full exercise of his functions until fourteen years later when a new governor (Altgeld) decapitated all the boards of trustees in order to secure at each institution a superintendent who would do his bidding

[5] In addition to all the usual domestic and farm and garden employments the following industries were regularly in use (see biennial report for 1890 p 20) broom making chair caning upholstering scroll sawing rug and mat making, rag carpet weaving tailoring shoe and slipper making and repairing, harness making tin smithing wall painting and decorating the making of paper flowers basket making knitting (all socks and stockings used), printing engraving and picture framing

[6] The training school fell into disuse for many years owing to political changes but has been reestablished in all the institutions in late years.

LESSENING RESTRAINT AND INCREASING PRIVILEGES

Mechanical restraint (the use of straight jacket, muffs, etc) in that day, as always considered an evil, was apt to be treated as a necessary evil and more or less a matter of course The policy adopted at Kankakee resulted in making it a rare exception No apparatus was kept in the ward If used it was applied only by the physician personally after an investigation as to its need This alone made restraint a rarity A report and record were made and kept on file of all cases of restraint or seclusion that occurred

To introduce more homelike atmosphere and soften the rigor of confinement and restraint was an especial object kept in view The following notes, taken from the "Illinois Institution Quarterlies" of 1914 indicate the progress made, and show that it has been continued in late years

> "At this time there are 1,000 paroled patients There are twelve open" cottages, whose doors are never locked and whose windows are not barred or screened Women attendants on male wards have been increased in number, ten wards have been put in charge of female nurses Every screened door has been taken off No patient's door has been locked at night In two months there has been no seclusion and only one case of "mechanical restraint" among an average of over 2,000 patients"

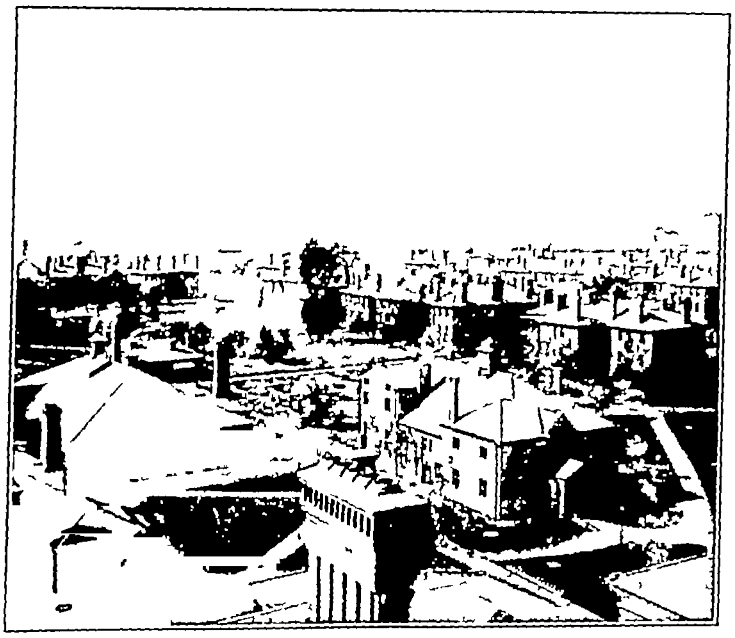

Fig 6 —View looking northwest.

These conditions were attained under the superintendency of Dr Sidney Wilgus

As the hospital at Kankakee was avowedly a departure from methods previously prevailing in architectural construction, and was administered with the purpose of putting to the test certain progressive ideas, the foregoing facts and statements are given

CONCLUSION

In closing we may ask the following question Was the more domestic style of construction, the so-called "cottage" or "detached ward," successful, and did it win general approval?

This question is answered by results immediate and remote so well known as to require only the briefest statement The more simple, segregated and less expensive style of architecture employed in the detached buildings at Kankakee as a substitute for the many storied congregate central building with wings (previously considered necessary) was given immediate recognition in many states, as shown above, and is accepted today as a matter of course

It may be said that *freedom* in construction rather than any stereotyped form of building resulted from the experience at Kankakee The change in constructive ideas would have come in any event, but was helped quite decisively by the experience obtained at Kankakee The fact was established that efficient care is the first essential, and is more important than any particular type of building

The reader is now, I hope, in a position to form his own opinion concerning the institution at Kankakee

In closing my account, as the person through whom the institution's plans and progress were carried out in its formative years, I desire to pay a tribute of honor to the memory of Frederick Howard Wines His ability and force of character were the originating and sustaining power in inception of "segregated" construction at Kankakee, as opposed to the "congregate" style previously prevailing His ideas, ably and eloquently presented, were the source of much that was new and valuable in the evolution of greater freedom, adaptability, intelligence and efficiency in constructing and organizing institutions for the insane in the United States

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THE ETIOLOGY OF IRITIS*

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AND

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CHICAGO

This study was undertaken primarily to determine the causes of "rheumatic" iritis, but in the absence of any clear distinguishing features of this form apart from etiology, we have included all cases of nontraumatic iritis,[1] and after examining each patient as completely as possible, have grouped them in accordance with the causes discovered in each

This report does not assume to be a complete survey of the causes of iritis, but is rather a recital of the infections which we found and of the evidence for and against the etiologic relation of each to the iritis The final conclusion as to the relative importance of each cause must be left to future studies

One hundred patients (forty-seven private and fifty-three clinical) have been thus studied[2] Careful attention was given to the history, and a complete physical examination was made to detect the presence of syphilis, tuberculosis, gonococcal infection, and infections of teeth, tonsils, sinuses, prostate, pelvis or other structures which might give rise to lesions in joints or eyes Laboratory examinations included Wassermann tests (ninety-eight patients) controlled by two laboratories, complement-fixation tests for gonococcal infection, roentgenograms of teeth and sinuses, and of the lungs when there was any question of pulmonary disease, and cultures of pus from tonsils, sinuses, prostate and other infected tissues Tuberculin tests, 1, 3, 5 and 10 mg being used, were made in suitable cases

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* From the Memorial Institute for Infectious Diseases, and the Presbyterian and Cook County Hospitals

* Read at the Fifty Second Annual Meeting of the American Ophthalmological Society, Washington, D C, May 9, 1916

[1] The eye condition encountered has been for the most part "plastic" iritis Certain cases showed a more marked involvement of the ciliary body or anterior choroidea, and the diagnosis was accordingly modified to "serous" cyclitis or to iridochoroiditis All cases were studied during an active stage of iritis No cases of sympathetic iritis or iritis following wounds, operations or ulcers have been included We have not encountered any cases of fulminating suppurative panophthalmitis during the period of this study

[2] We are indebted to Drs Wescott Pusey, Wilder, Darling Beard and Blue for the privilege of using the notes of cases referred to one of us (E E I) for study We are also indebted to a number of our colleagues, whose cooperation in painstaking and laborious clinical and laboratory examinations has added much to the completeness and accuracy of our study Among others, we acknowledge the valuable assistance of Drs Ormsby, Harris McEwen and Stillians in the diagnosis of certain cases of syphilis, Drs Shambaugh Friedberg, Boot, Beck and Sonnenschein in examinations of the nose throat and sinuses, Drs Gilmer, Moorehead, Potts, Puterbaugh and McGuire for advice in and treatment of dental conditions, Drs Potter and Blaine for many roentgenographic studies of teeth and sinuses, and Drs Nicoll Bissell and Moody for extensive serologic studies

After a complete survey of the patient, appropriate measures were taken to remove all infections so far as possible From the course of the iritis following these procedures, we obtained valuable evidence confirmatory of the etiologic diagnosis In patients in whom we found but one source of infection, removal of which was followed by immediate improvement of a previously intractable iritis, no special difficulty was experienced in drawing reasonably safe conclusions as to the relation of cause and effect

We found two or more infections associated in a surprisingly large number of patients In many of these the reason of the association was obvious, thus, infections of tonsils, sinuses and teeth, or syphilis and gonococcal infection were often found together In other instances, there was no apparent direct relation between two infections, such as syphilitic iritis from secondary syphilis, associated with a latent alveolar abscess

THE CAUSES OF IRITIS IN ONE HUNDRED CASES

Infections	Alone	With Other Infections	Total	Coincident Infections: Syphilis	Gonorrhea	Tuberculosis	Dental	Tonsil	Sinus	Genito Urinary
Syphilis	10	13	23		8	5	5	1	1	
Gonococcal infection	7	2	9				1	1		
Tuberculosis	8		8							
Dental infection	7	11	18	2	2	2		7	1	
Tonsillar infection	7	9	16	1	3	2	7			
Sinus infection..	1	2	3				1	1		
Genito-urinary (nonvenereal)	3		3							
Other infections	2		2				1			
No cause found	1		1							
Combined infections			17	8	9	7	8	13	5	1
			100							

By a careful weighing of all the evidence, we were able to determine in most cases which infection was probably responsible for the disease of the eye, but sometimes the available evidence was insufficient, and we have placed such cases in a "combined" group Some of these patients suffered from several infections Syphilis, active tuberculosis, gonococcal infection and alveolar abscess were repeatedly found in the same individual

The accompanying table summarizes (1) the number of times each infection was found in direct etiologic relation with the iritis, and (2) the coincident infections found

SYPHILIS

The relation of syphilis to iritis affords one of the most interesting studies in this series

The history of infection, and the evidence of past and present infection, were carefully investigated in each case In ninety-eight cases, Wassermann tests, usually controlled by two laboratories, and in doubtful cases repeated two and three times, were made In the two cases in which this test was not made, there was no history or clinical evidence of syphilis, and the iritis in both was definitely ascertained to be due to other causes

In thirty-nine cases, syphilitic infection had occurred either recently or years before Of these cases, twenty-eight were dispensary and eleven private patients In twenty of the thirty-nine cases, the iritis was clearly syphilitic, of this twenty, thirteen showed other clinical evidence of active syphilis Of the seven in which other active syphilis was not apparent, the Wassermann reaction was positive in all The iritis was recurrent and had been previously observed in association with acute syphilis in four, a condyloma of the iris was observed in another, in two the diagnosis would have remained in doubt without the Wassermann test All seven recovered promptly on antisyphilitic treatment Three other cases of the thirty-nine probably were due to syphilis, judging from the prompt relief following antisyphilitic treatment, although other possible causes, such as active gonococcal or tonsillar infection, were also present

The remaining sixteen cases of the thirty-nine are of interest because they illustrate the obvious fact that a person infected with syphilis may also suffer from bacterial infections, which may be the real cause of secondary metastatic lesions We shall refer later to the influence of one infection in the body on other subsequent infections

Of the sixteen cases in which the iritis was not syphilitic, the grounds on which syphilis was excluded as the cause varied In none were there signs of active syphilis In five the time of infection was remote, seven, twenty-two, twenty-five, twenty-seven and forty-five years previous, and the Wassermann reaction negative In all, there were other causes present, following the removal or appropriate treatment of which, where this could be done, the iritis subsided without antisyphilitic treatment In several of these, the iritis had previously resisted antisyphilitic treatment in other hands Among the causes of the iritis in these cases were tonsillar, sinus and gonococcal infection with arthritis In three the iritis subsided at once after the drainage of alveolar abscesses In one case due to alveolar abscesses, the iritis appeared contemporaneously with extensive arthritis, while the patient was receiving mercury for syphilis of twenty years' standing Removal of the abscesses resulted in prompt cure of arthritis and iritis

The distribution of syphilitic iritis between the dispensary group and the private group of cases is of interest Of forty-seven private cases, syphilis was present in eleven, and was the cause of the iritis in six, while of fifty-three cases in the clinic, syphilis was present in twenty-eight, and was the cause of the iritis in seventeen The patients in the clinic at Cook County Hospital were in part referred to us as outpatients, and in part came from the wards of the county hospital, including the venereal ward The inclusion of several cases of syphilitic iritis from the venereal ward raises the proportion somewhat above what might be encountered in a hospital which does not receive patients with active syphilis We have been able to discover no other reasons for assuming that the figures given do not fairly represent the proportion of syphilitic iritis in a metropolitan clinic, so far as conclusions may be drawn from a limited number of cases

In unselected groups of cases syphilis is encountered more frequently in the wards of a charity hospital than in private practice, and in the latter also the disease is more likely to be efficiently treated, and the complications of untreated syphilis are therefore less frequent.

Out of 100 successive cases of iritis, there were only twenty-three in which syphilis was the cause of iritis, and sixteen others due to other causes in which syphilitic infection had occurred, making a total of thirty-nine patients in whom syphilis had to be seriously considered in the etiologic diagnosis. This leaves sixty-one cases in which a searching examination failed to reveal any evidence of past or present syphilitic infection, and in which, therefore, the iritis could not be reasonably thought to be due to syphilis.

So far as one may draw conclusions from this number of cases, it would seem that the widely accepted statement that 50 per cent. or more of iritis is due to syphilis may have to be revised. Certainly in the absence of other evidence of active syphilis in a patient with iritis, the assumption that the iritis is syphilitic is more likely to be wrong than right.

DENTAL INFECTION

Infections about the teeth occur in a large proportion of all persons, and care must be exercised in ascribing to such infections a causal rôle when they happen to be found in the subjects of iritis, or other metastatic lesions.

In this study we have not included peridental infections as possible causes unless they were closed processes, that is, apical infections (alveolar abscesses), demonstrated by roentgenograms and confirmed by the oral surgeon on extraction.

In certain cases of extensive pyorrhea, lateral abscesses occur, or the tissues may be deeply invaded with resulting metastatic lesions; but in the present series, such cases have not been encountered. In several cases, alveolar abscess was the only discoverable infectious process in the body, and the removal of the abscess was followed by prompt and permanent relief of the iritis.

Alveolar abscesses, or apical infections demonstrated by roentgenograms and confirmed by the oral surgeon, were found in forty-one patients (twenty-four clinical and seventeen private). In eighteen patients (ten private and eight clinical), we regarded the dental lesion as the source of the iritis. The evidence on which this conclusion was based varied in the several cases, but included such facts as the absence of other sources of infection and the prompt clearing of the eye on removal of the cause, or the association of the initial attack or recurrences of iritis with known dental infection; or, if other infectious processes were also present, the failure of treatment to relieve the iritis until the abscesses were discovered and removed.

In ten clinical and five private patients the iritis seemed to be clearly due to other causes, such as syphilis and tonsillar infection, and the dental infection relatively inactive so far as concerned the causation of metastatic lesions. Latent alveolar abscesses are often found in persons not suffering from iritis or other evident metastatic disease.

In the remaining nine patients (seven clinical and two private) the dental infection was associated with other infections, often two or more, including tonsillar, sinus, syphilitic or gonococcal, and we were unable to satisfy ourselves which infection was responsible for the disease of the eye. So far as possible, we tried to arrange the sequence of surgical and other treatment so that we could observe the effect of each procedure on the eye; but in a number of instances, considerations of expediency and the saving of vision made it necessary to proceed rapidly to the elimination of all possible causes of the iritis.

Cases of this type, in which the difficulty in assigning a cause for the iritis arose not from inability to find an infectious process but in deciding between several adequate causes, we have preferred to group under the heading of "combined infections," rather than to guess as to which of the infections was the exciting cause of the iritis. This group will be discussed later.

TONSILLAR INFECTION

Tonsillar infections appear to be as important an etiologic factor in iritis as in arthritis and other metastatic lesions. Under tonsillar infections, we have included deep infections of the tonsils, and intratonsillar and retrotonsillar abscesses, but have not included slight lesions such as small crypts containing "cheesy" material, unless accompanied by deeper infection. Superficial infections are not to be disregarded in the routine examination, however, for they often furnish a clue which leads to further investigation and the discovery of deeper hidden infection.

In some cases the history of previous tonsillar infections, the appearance of the tonsils, the enlargement of regional lymph nodes, and the associated arthritis and myositis point directly to the tonsils as the source of the iritis; but in other cases, careful and repeated search is required to discover the deep tonsillar abscess, the removal of which results in relief of the iritis.

The tonsil was clearly the source of infection in sixteen cases (twelve private and four clinical). In thirteen cases of the combined group, tonsillar infection was present with other infections; but, as in the case of dental infections, we were not able to determine whether tonsillar or dental infection was the immediate source of the iritis. It is of some interest to note that twelve of these thirteen combined cases were in the dispensary group, and if all the facts could be determined, it is probable that a number of these would fall in the tonsillar group, thus raising the proportion of tonsillar cases in the dispensary group from four clearly defined cases to a number more nearly corresponding to that in the private group (twelve cases), in which multiple infections were less numerous, and consequently an etiologic diagnosis more easily made.

In cases clearly due to other causes, tonsillar infection was found in several; in the syphilitic group, two; gonococcal, one; sinus, one, and dental seven. Tonsillar and dental infections are frequently found together, and the question may well be raised as to whether the dental infection may not have developed in previous months and years by the same mechanism as the iritis, by repeated infections from the tonsils. Cultures from tonsillar abscesses after tonsillectomy often showed hemolytic streptococci.

GONOCOCCAL INFECTION

Gonococcal infection was believed to be the cause of the iritis in nine patients, all male. In eight of these an active or recent, usually multiple, arthritis was present. In seven the iritis was recurrent and often associated with recurrent arthritis following exacerbations of urethritis. In one case the iritis occurred during an acute gonorrhea without arthritis. In another a recurrence of the iritis was noted during a period of fever, with arthritis, and the gonococcus was isolated from the blood. A positive gonococcal complement fixation test was obtained in six of seven cases in which it was made. Three of these patients came to one of us for advice as to arthritis, so that it is possible that the proportion of gonococcal iritis is slightly larger than would be the case in a second hundred cases in which this element of selection was not operative.

In seven of the nine patients, infections other than gonococcal were not found; in the other two, both recurrent, tonsillar or dental infections were found, but the recurrences were closely associated with exacerbations of urethritis and arthritis. It is, of course, conceivable that a urethritis with general infection and arthritis might so depress the resistance of a patient to other infections that a latent infection in the tonsil might give rise to an iritis; but such an assumption seemed hardly justified in the two cases under discussion. All evidence in each case must be considered, however, for the mere finding of a positive complement fixation test in the subject of gonorrhea does not indicate a gonococcal origin of the iritis any more than a positive general tuberculin test alone indicates that an iritis is tuberculous.

In cases due to other causes, gonococcal infection was present in thirteen: eight of the syphilitic group, two of the dental, and three of the tonsillar, all dispensary patients.

In the combined or undetermined group, evidence of active gonococcal infection was found in nine, of whom eight gave a positive complement fixation test. All nine patients were in the dispensary group. One or more attacks of multiple arthritis with recurrences of urethritis had occurred in several of these patients. In one patient who had contracted syphilis twenty-two years previously, the initial attack of iritis occurred four years later coincidently with arthritis and directly following urethritis. During the year preceding the present attack, the iritis had recurred coincidently with the appearance of tertiary syphilitic lesions of the leg and mouth. At the time of examination the syphilis had healed under treatment, but the iritis was still active, the Wassermann was negative, and gonococcus complement fixation positive. The mouth was extremely foul with extensive caries and gingivitis (apparently not mercurial), but no alveolar abscesses were found. A positive tuberculin reaction followed the injection of 1 mg. O. T., and later an acute attack of tonsillitis occurred. Here it seems reasonable to assume that the initial iritis may have been gonococcal, but the possibility of the active participation of one of the other coincident infections cannot be excluded.

Such cases as the foregoing illustrate the difficulty of evaluating the several possible causes of iritis in patients, especially of the dispensary group, in whom multiple infections are frequently found.

TUBERCULOSIS

In eight patients (three clinical and five private) the iritis appeared to be tuberculous. In seven the evidence seemed clear, and in one presumptive. In two of the seven, active clinical tuberculosis was present, and in five positive tuberculin reactions, together with other evidence of tuberculosis, such as changes in the lungs, were demonstrated by physical examination and roentgenoscopy. In two cases focal reactions in the eye repeatedly occurred following tuberculin tests; in interpreting these reactions, care was taken to avoid confusing them with the sudden exacerbations of inflammation which may occur spontaneously in iritis. In none of the seven was there any other discoverable focus of infection.

Evidence of the presence of tuberculosis, usually latent, was found also in five patients in whom the iritis was due to syphilis, in two each of the dental and tonsillar groups, and seven of the combined group, the latter all dispensary patients.

SINUS INFECTION

In three patients the iritis was considered due to infection from the sinuses. In several others, the sinuses were infected together with other structures such as tonsils and teeth, but it was not possible to determine whether one or another of the lesions was the immediate source of the iritis, and these cases were accordingly placed in the combined group. For practical purposes the importance to the patient lies in the recognition of the presence of infection, whether it is in one or more places, and its eradication.

Abnormalities in the several sinuses were discovered on routine clinical examination or by roentgenoscopy in nineteen cases, in ten of which active infection was demonstrated. In spite of able assistance, and the recent advances in roentgenographic and clinical diagnosis of sinus disease, we have experienced more difficulty in determining the presence or absence of infection in the sinuses than in any other region of the body.

OTHER INFECTIONS

In three cases, the iritis was associated with nonvenereal infections of the genito-urinary tract, including two of the prostate.

In one instance no adequate cause for the iritis was found.

Diabetes was present in three cases, but in each instance, infections were also present, in one, alveolar abscess; in one, tonsillar abscess, and in one, tuberculosis, syphilis and tonsillar infection.

Several cases came to us with a provisional diagnosis of "iritis from autointoxication." In none of these did we fail to find active infectious processes, such as tonsillar or alveolar abscess, and the previously resistant iritis subsided on relief of the infection without measures specially directed toward the treatment of the supposed "gastro-intestinal autointoxication."

When anemia, weakness, anorexia, achylia, diarrhea or constipation occur in the course of an acute infectious disease, or in certain chronic but clinically evident infections, we recognize that they are the results of disturbance of the functions of the body arising from the infection; but when they are associated with unrecognized infections, together with metastatic lesions of the joints or eyes, we may be tempted to correlate the gastro-intestinal disturbance with the arthritis or iritis, and overlook their common cause. There is no question as to the importance of the regulation of diet, of the correction of constipation, and of all other measures which will improve nutrition and increase bodily resistance to infection; but even these important procedures should not be allowed to supplant or interfere with the search for infectious foci and their eradication.

COMBINED INFECTIONS

There were seventeen patients in whom several infections were present, or in whom there were several foci harboring the same or different infections in such combination that we could not with certainty determine which infection had given rise to the iritis These cases have already been referred to in discussing the incidence of the several types of infection

The patients belonged largely to the dispensary group, and careless habits of life and the physical handicap imposed by the disability arising from some one infection, such, for example, as gonococcal arthritis or pulmonary tuberculosis, no doubt contributed to the lessening of resistance and made the sufferer more susceptible to subsequent infections The unfavorable action, as regards the host, of one infection on another was probably also a factor in producing the large number of infections and their complications in this group

But even in this unfavorable residue, the results of treatment directed toward the elimination of the infections were remarkably good, and we had the satisfaction of seeing many hitherto stubborn cases of iritis relieved

In twelve of the seventeen, recovery followed the removal of infectious processes In two cases satisfactory results were not obtained despite months of treatment, secondary glaucoma was present in both

In two we were unable to complete the eradication of infections, and one patient is improving slowly under tuberculin

THE MECHANISM OF THE PRODUCTION OF IRITIS

Focal infections are very frequent, and yet many persons do not suffer from iritis or other metastatic lesions Sepsis, streptococcal or pneumococcal, is also frequent, but metastatic lesions of the eye relatively rare Given an alveolar or tonsillar abscess, what are the causes which lead to the production of iritis or arthritis in one person and not in another, at one time and not at another? An adequate answer to this question requires a more complete knowledge of the mechanism of immunity than we now possess, and certainly a discussion of what is already known would require more space than is at our disposal A consideration of some of the factors involved is possible, however

Iritis can be produced in animals by intravenous injection of bacteria, as shown by Stock and others

Bacteria reach the eye by the circulating blood, and can be recovered from the eyes of animals in which iritis has been experimentally produced

In some recent experiments we have produced iritis in rabbits by intravenous injection of the streptococcus, *B mucosus capsulatus* (Friedländer), *B pyocyaneus,* and the gonococcus Usually, however, in order to accomplish this, large doses must be given, so that a condition of sepsis is created, and then only in occasional animals is iritis produced Certain of these animals recover, and the lesion of the eye heals

If one of each of a series of rabbits is injured by intra-ocular injection of minute amounts of dead bacteria, and then after the eyes have healed and all active inflammation has disappeared, an intravenous injection of living bacteria is given, there follows an inflammation of a larger proportion of the injured eyes than of the control eyes By this procedure we have produced ocular inflammations by the injection of staphylococci as well as streptococci Such experiments bear directly on the problem of recurrences of iritis

In addition to the factors of sepsis, fortuitous embolism, and previous trauma of the eye, changes in the organisms themselves must be considered in a study of the causes which determine the occurrence of lesions of the eye In a case of streptococcal infection of the tear sac which had presumably given rise to iritis, we were able to produce iritis in rabbits by injection of streptococci when first isolated from the patient[3] Later the same cultures and other cultures obtained at subsequent dates from the patient failed entirely to produce lesions of the eye We were not able to make out any changes in morphology or cultural reactions coincident with the change in localization with respect to the tissues of the eye

From our clinical study and from our experiments thus far, it would appear that not one but several factors are concerned in the production of iritis, among which may be noted the presence of a focus of infection in which bacteria may live and multiply, partially protected from the resisting forces of the host, the periodic entrance into the blood stream of these organisms and their lodgment in the eye, either by reason of their great number as in sepsis, or by fortuitous embolism, changes in the eye itself, either in vascular anastomoses, or in susceptibility of the ocular tissues owing to previous injury, and finally changes in the organism itself, whereby it becomes better able for a time to maintain itself in the tissues of the eye Such adaptations on the part of the organism do not necessarily imply any demonstrable change in its morphology or cultural reactions

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CHYLOTHORAX, CHYLOUS ASCITES AND LYMPHOSARCOMA

REPORT OF CASE

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Chylothorax is a comparatively rare disease The case herein reported was typical and was fortunately followed by a postmortem examination

REPORT OF CASE

Clinical History (by Dr Tuley) —Mrs M, aged 58, married thirty-six years, with two children living, had five brothers and sisters, of whom one died of "brain fever," one of typhoid fever and one of pneumonia, those living being in good health The menopause occurred seven years ago, without complications The patient has always been robust, the normal weight being about 200 pounds For several months she complained of pain in the scapular regions of both sides, and could not lie on her back For a year she has had pain and fulness in the epigastrium after eating She had had an acute attack of tonsillitis in September, 1915, being then attended by Dr W F Boggess Recovery from this was uneventful

I first saw the patient, Oct 4, 1915, for an attack of dyspnea, the cause of which seemed apparent as the chest was full of sonorous and sibilant rales, and the breathing was typical of asthma She was given a calomel purge, kept quiet and improved, but on the 21st was seen by Dr Frazier in my absence from the city, for a recurrence of the dyspnea In view of the condition of the throat, one tonsil having a thin patch on it, and a severe pyorrhea alveolaris, it was deemed advisable to administer some autogenous vaccines, which was done, during the next ten days, with a cessation of the adventitious sounds, but no improvement in the dyspnea. November 1, a careful examination was made of the thorax, and the presence of fluid diagnosed in the left pleural cavity A peculiar feature of the chest findings at this time was the presence of bronchial breathing over the entire left lung, anterior and posterior, with intense flatness over the left base At this time she was seen by Dr Weidner, and the diagnosis of pleural effusion confirmed November 2 a thoracentesis was done through the eighth interspace, and 3 pints of thin milky white fluid were withdrawn The appearance was that of pus, but an examination showed it to be free of cells and to be a sterile chylous fluid The relief from the dyspnea was almost immediate, there being but little cough following the aspiration

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[3] Irons, E E, Brown, E V L and Nadler W H The Localization of Streptococci in the Eye, Jour Infect. Dis 1916, xviii, 315, abstr, The Journal A M A, March 18, 1916, p 920

November 8, with a return of the dyspnea corroborated by chest findings, the left pleural cavity was again tapped and 3 pints of chyle removed

November 14 3½ pints were withdrawn, November 24, 4 pints, December 2, 4 pints, December 6 4 pints, December 30 3½ pints were withdrawn from the right pleural cavity, February 6, 4 pints of serous fluid from the right and 2 pints from the left, February 15, 2 pints of chyle from the right and 1½ pints from the left, February 20, 3 pints from the right, February 29 3 pints, March 8, 4 pints, March 13, 3 pints, March 18, 2¾ pints, and March 26, 3 pints, all from the right The total quantity of chylous fluid removed from this patient's chest was 48¼ pints

TABLE 1—CHEMICAL ANALYSIS OF THORACIC FLUID *

	Drawn			
	February 6			
	Left Side	Right Side	December 6	November 24
Specific gravity	1 0158	1 0178	1 013	1 0145
Total protein	3 9%	4 03%	3 43%	3 5%
Sugar	295%	257%	4%	49%
Ether soluble material	567%	307%	2 63%	2 33%
Ash			91%	79%
Total solids	5 26%	5 26%	7 64%	7 7%

* Analysis by Miss Francke in University of Louisville Laboratory of Chemistry

TABLE 2—BLOOD COUNTS

	November 24 Dr Horine	December 9 Dr Moore	December 22 Dr Moore	March 26 Dr Moore
Red cells	4 900 000	4 900 000	4 890 000	4 800 000
White cells		10 000	9 520	25,200
Hemoglobin	78%*	85%		
Polymorphonuclears	89 1%	82%	88%	95 63
Small lymphocytes	9 1%	6%	8%	6
Large lymphocytes	1 0%	3 5%	3 4%	3 6
Eosinophils	5%	7%	2%	
Transitionals	3%	1 5%	4%	

* Sahli

December 20, a spot developed on the right tonsil ¾ by 2 inches in size The exudate was thick dirty white very tenacious, leaving a bleeding surface when removed and looked very much like the membrane of diphtheria At this time the patient was seen by Dr A O Pfingst Bacteriologic examination was negative for the Klebs-Löffler bacillus but the typical spirilla and organisms of Vincent's angina were found associated with all varieties of pus-producing organisms At this time a chain of enlarged glands was found in the right neck which remained large up to the time of her death

The patient failed rapidly from the middle of March Emaciation was progressive and sedatives were required constantly to quiet the restlessness though no great pain was complained of Marked edema of the lower extremities developed and a chylous ascites was present during the last two weeks A small quantity of chylous fluid was aspirated from the peritoneal cavity a few days before she died Death occurred quietly at 5 a m., April 8 1916

The chemical analysis of the thoracic fluid (Table 1) follows closely that given by Wells[1]

Urinalysis, November 23, revealed specific gravity, 1 018, acid, no sugar, no albumin, triple phosphates, crystals, few leukocytes, hyaline and granular casts

October 5, the specific gravity was 1 012, and the urine was negative except for crystals of ammonia, urates and a few leukocytes

Dr Bayless' report of the Roentgen-ray examination, December 3, showed the right side normal with a movement of 2 inches of the right diaphragm On the left side from below the third rib in front, it was dark, above the third rib the lung was clear but somewhat emphysematous The area was so dark that no details of the lung could be made out It might have been a thickened pleura with fluid or some new growth The heart was in the normal position The posterior mediastinum above the third rib was clear Below it was dark, but evidently from the same condition which caused the dark area in the left chest

The Wassermann reaction on the blood taken December 1 was negative and the cultures made from the fluid from the left pleural cavity were negative A few lymphocytes were noticed

A careful examination of the blood between the hours of 9 p m and midnight was made by Dr Moore without finding any evidence of filariae

REVIEW OF LITERATURE

The literature of chylothorax is very meager, though there are a number of references to chylous ascites

The most complete report which has been accessible is by Sale,[2] who reported one case and reviewed the literature on the subject complete to the year 1899 He found a record of forty-one cases reported in the past 260 years

The etiology of this condition is of interest, and the causes given by Sale in the recital of these reported cases are new growths or tuberculous lymph nodes, 9, thrombosis of the left subclavian vein, 4, secondary growths in the duct itself, 9, perforating lymphangitis, 2, aneurysm of the duct itself, 2, and 1 each of thrombosis of the duct, operation for removal of lymph glands of the neck, mitral disease, filariae, and inflammatory thickening of the mesentery

Warthin[3] has a very complete description of the various anomalies and pathologic conditions of the thoracic duct which may result in escape of the chyle

He describes thrombosis of the chylous duct as one of the most frequent complications resulting in chylothorax, and its etiology is given as hemorrhage into the duct, inflammation of its wall, trauma, tuberculosis, metastasis of malignant tumors, infection, filariae, pressure of neighboring tumors, aneurysms, anomalous vessels, exostoses of the vertebra, obliteration of the left subclavian vein, etc

The symptomatology of thoracic duct thrombosis is purely one of obstruction so far as its distinctive features are concerned Chylous ascites alone or combined with chylothorax or chyluria would point to such an obstruction Obscure abdominal pains, intestinal disturbances, edema or elephantiasis of the lower extremities or external genitals may occur as features of the clinical picture

In all cases in which the collateral circulation is inadequate there results a chyle stasis with dilatation of the duct and radicals The chyle may escape from the distended vessels by transudation or rupture, and may infiltrate the tissues or collect in the serous cavities, giving rise to a chylothorax, chylopericardium or a chylous ascites

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[1] Wells Chemical Pathology

[2] Sale Interstate Med Jour January 1912

[3] Warthin in Osler's Modern Medicine.

Dock[4] reports a case of chylous ascites and chylothorax in which there was a lymphosarcoma with lymphocythemic blood, though the white cells were not greatly increased.

From the few reports found in the literature it would seem that secondary sarcoma of the testis, lymphocytoma of the mesentery, osteosarcoma or chondrosarcoma of the pelvic bones and primary endothelioma of the peritoneum are the most frequent primary lesions found.

NECROPSY

The postmortem report is abbreviated to those conditions having to do with the chylothorax.

Examination (made April 8, 1916, three hours after death, at the home of the patient by Dr. Graves assisted by Dr. Moore).—The body was poorly nourished. There was marked edema in the lower legs and thighs.

Peritoneal Cavity. Superficial fat was 3 cm. thick and bright yellow. About 500 c.c. of thin, milky fluid was in the cavity. Small fatty globules floated on the surface of this fluid. The peritoneum was everywhere smooth and glistening. The liver reached 15 cm. below the base of the xiphoid cartilage, and 5 cm. below the costal margin in the right midclavicular line. Diaphragm. Left, sixth rib, right fifth interspace. The appendix was retrocecal, free, pale, curled on itself, lying toward the pelvis. The mesenteric nodes were enlarged. The foramen of Winslow was patent, but the lesser sac was encroached on by a moderately firm, nodular, retroperitoneal mass. The lymphoid tissue is described later.

Pleural Cavities. The right lung was pushed upward by a collection of milky fluid which filled the lower half of the right cavity so that the lower border of the organ lay opposite the fourth rib anteriorly and the sixth rib laterally. This fluid was similar to that in the peritoneal cavity except that some of it soon after the admission of air appeared clotted. Firm, fibrous adhesions bound the lung to the wall over the greater portion of its surface except the inner aspect of the apex. Between it and the wall there was no fluid or other obvious abnormality. The left pleural space was entirely obliterated with dense, fibrous adhesions except over an area about the size of the palm between the infero-lateral aspect of the lower lobe and the chest wall, where there was a shallow pocket filled with the same chylous fluid.

Pericardial Cavity. This contained about 15 c.c. of clear serous fluid.

Lungs. Both organs were compressed and covered with fibrous tags. Crepitation was much diminished. The organs were doughy and pitted on pressure. On section they were dark red and did not present a normal spongy appearance.

Spleen. This organ was enlarged, was firmer than normal, had a pale gray capsule, measured 6 by 9 by 18 cm. and, on section, presented a great many round or oval, fairly well circumscribed, raised, grayish, homogeneous nodules in dark red parenchyma. The largest deposit was about 25 mm. in diameter.

Pancreas. The head was involved in a tumor as described below. The tail was negative.

Tumor and Its Relations. The lymph nodes from the neck to the pelvis, especially those lying in the posterior mediastinal space and retroperitoneal, were involved in an apparently primary neoplasm which was growing around the structures in those regions but did not infiltrate any except the head of the pancreas. The cervical, axillary, supraclavicular and infraclavicular and bronchial nodes varied in size, the largest being about 2 cm. in greatest diameter, were encapsulated and moderately firm, and, on section, pale flesh color and homogeneous except the last, which were speckled with black. The posterior mediastinal nodes were much larger, reaching a maximum diameter of 4 cm., but were encapsulated and softer and paler on section. Below the level of the diaphragm the nodes seemed conglomerate in a mass larger than one's fist, and involved the head of the pancreas. On section this tissue was moist, pale, homogeneous and typically like fish flesh, while scattered in it could be seen lobules of pancreatic tissue. The lymph nodes along the lesser curvature of the stomach, in the gastrohepatic omentum and retroperitoneal along the aorta were enlarged, those in the gastrohepatic omentum reaching a diameter of 4 cm., while those about the abdominal aorta decreased in size to the region of the bifurcation, where they measured about 2 cm. in diameter, but were of the same appearance as those described above.

In situ structures about the innominate veins were dissected, primary incision being extended at right angles laterally along the left clavicle. No abnormality or rupture of the thoracic duct could be found. In posterior mediastinum duct, esophagus and vessels were surrounded by the tumor, but none of these structures was invaded macroscopically. The heart, lungs, trachea, esophagus, aorta, thoracic duct, pancreas, kidneys and suprarenals were removed en masse. The duct was slit open and followed to its beginning branches. Its mucosa was smooth everywhere.

Microscopic Examination.—Sections from the retroperitoneal mass just below the diaphragm and from the cervical, axillary, clavicular, mediastinal, gastrohepatic, abdomino-aortic and iliac glands presented practically the same appearance. The normal markings were largely hidden by a diffuse accumulation of cells of the lymphocyte series, many of embryonic, undifferentiated type. They were mostly round, and varied considerably in size. The smaller cells were typical lymphocytes. The larger ones had less regularly outlined cytoplasm and nuclei. The cytoplasm was nongranular. The nuclei were paler, relatively larger and less distinct, and contained coarse chromatin granules. Many of the larger cells were multinucleated. Monasters and diasters were numerous, and an occasional multiple mitosis was seen. In a few places a moderate number of eosinophils were noted. In most of the lymph nodes, tumor cells were infiltrating the capsule and the surrounding fatty and fibrous tissue. Microscopic diagnosis, lymphoblastoma, malignant lymphosarcoma, round cell sarcoma.

Lung. At one side was an area of invasion by cells similar to those previously described as forming the tumor. These could be seen in the lymphatics along some vessels, but were also made out within the vessels. At the edge of this area these cells were advancing along the alveolar walls and into the alveolar spaces. Microscopic diagnosis lymphoblastoma.

Spleen. One section showed loss of normal splenic structure, a few trabeculae and arterioles lying in the midst of a diffuse growth of lymphoblastic cells similar to those described in the tumor. The stroma in places had undergone fibrinoid change. Another section presented fairly well circumscribed islands of tumor cells, between which splenic tissue was compressed with a relatively increased number of trabeculae. In such interinsular splenic tissue some sinusoids were greatly dilated, and there were clusters of endothelial leukocytes filled with hemosiderin. In the islands of the tumor cells were spots of apparent hemorrhage. In others small areas of fibrinoid change of stoma were seen. Occasional eosinophils were noted. Outlying from the larger islands of the tumor cells were smaller aggregations of similar cells suggesting lymph nodules. Some of these, however, involved cross sections of two or three trabeculae and one or two arterioles. Microscopic diagnosis, lymphoblastoma.

Pancreas. Four sections showed diffuse infiltration of the fat about the pancreas by lymphoblastic cells like those previously described, and more or less diffuse infiltration of the pancreas itself by like cells. The cells seemed to be advancing from without by expansion. In places small islands of glandular tissue were surrounded by such cells. In other places such cells were infiltrating only in the connective tissue stroma between the glands. Occasionally a group of pancreatic cells showed karyolysis or karyorrhexis or complete granular degeneration. Such groups were invaded chiefly by polymorphonuclear leukocytes. In some places there was a relative increase of fibrous tissue in the stroma, in which regions some acini were dilated with secretion and contained a few polymorphonuclear leukocytes. Among the invading lymphoblastic cells eosinophils were not infrequent Microscopic diagnosis, lymphoblastoma invading pancreas, causing injury, reaction and beginning sclerosis

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[4] Dock Am. Jour. Med. Sc., 1907.

Final Diagnosis—Lymphoblastoma of cervical, axillary, clavicular, mediastinal, gastrohepatic, abdomino-aortic and iliac lymph nodes, invading pancreas and lung, compressing other structures adjacent to them and metastasizing in the spleen Chylothorax, bilateral Chylous ascites Gastric ulcers Hemorrhage into intestine Chronic endocarditis Chronic aortitis Edema of legs Fibrous pleural adhesions, bilateral Superficial ecchymoses Acute dermatitis of left leg Multiple leiomyomas of the uterus Senile ovaries Postmortem change in the suprarenals Chronic gingivitis Atalectasis of lungs

AN UNUSUAL CASE OF CHRONIC INTERSTITIAL NEPHRITIS

WITH FINDINGS IN BLOOD AND URINE*

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History—A man, E O M, aged 39, married nine years, with no children, fruit grower, an occupation which he had followed for ten years, whose father and mother were living and well, as were four brothers and four sisters, he being among the younger of the children, had measles when he was a child, but after that time had had nothing more serious than "colds" in the head, and had not found it necessary to consult a doctor until March, 1915 His habits had been good, he rarely took a glass of beer, used three cigars a day, never more, and drank coffee or tea at meals three times a day He denied having had any venereal infection, and the Wassermann reaction was negative His appetite had always been good, his bowels regular, and his weight practically stationary, 180 to 185 he being about 6 feet tall

He believed his present trouble had begun in March, 1915, when he noticed his vision was becoming dim, for which he thought it necessary to consult an oculist at Poughkeepsie His oculist directed him to give up the use of tobacco, which advice he followed, though he was smoking only three cigars a day Soon after this he had periods of severe, persistent headaches with complete remissions The headaches were accompanied by loss of appetite increasing weakness and loss of weight, until June, 1915 when he was examined by his family physician, who diagnosed Bright s disease and prescribed a diet free from meat and salt, and 2 grains of sodium nitrite three times a day He had continued both the diet and medicine until he came under my observation During the summer and autumn he had continued his daily outdoor work, but had yielded to the advice of his physician to spend the winter in Florida, whither he was bound when he came to me on Nov 30, 1915

He walked into the office and desired me to express an opinion as to whether it was necessary for him to continue his journey south This is mentioned only to show that his symptoms were so slight as not to impress him or his family with the belief that he was seriously ill

On being questioned he said he was weaker than usual, and exertion made him a little breathless, at times his head ached and he had a little vertigo after he stooped over He could not see printed matter clearly to read He had little appetite, but his bowels moved regularly He had lost gradually some 15 or 20 pounds of weight in the course of the six months He said that during the previous week or ten days whenever he was about to lose consciousness in sleep, something seemed to give way and he awoke with a start This was particularly annoying at night, but during the day he might obtain, at intervals a few minutes sleep

Examination—The man was found to measure 6 feet tall and to weigh 165 pounds He was evidently undernourished, and the skin and mucous membranes were very pale The odor of the breath was distinctly urinous the tongue was flabby and pale, with a moderate coating over the posterior half, the tonsils were not abnormal, and though several of his teeth had been filled, there was neither pyorrhea nor decayed roots There was a very marked tremor of the muscles of the arms and legs Examination of the eyes showed normal reflexes, but the eyegrounds, as subsequently corroborated by Dr A E Davis, had several white areas, and three or four feathery hemorrhages The temperature was 97, the respirations 16 per minute, there was a good Litten diaphragm phenomenon, and the signs of a moderate emphysema The arteries were distinctly thickened and tortuous The rhythmic apex beat of the heart was seen and felt in the fifth interspace within the midclavicular line The orthodiagram of the heart measured 8 9 cm from midsternal line to apex, and 4 3 cm from midline to right border The aortic shadow was 4 5 cm wide There were no thrills felt, and the first sound at the apex was loud and clear, with reduplicated second sound At the junction of the third rib with the left edge of the sternum there was a distinct systolic blow, with a loud, ringing second sound The measure of the blood pressure showed it to be systolic 270 mm, diastolic 140 mm mercury, and there was a pulse frequency of 80 The electrocardiogram indicated a preponderance of the left ventricle The abdominal examination was negative There were no glandular enlargements The deep reflexes were greatly exaggerated, and a fine tremor of the muscles could be felt when the extremities were held There was neither Kernig nor Babinski phenomenon, and there was no edema of the ankles

TABLE 1—SHOWING AMOUNT OF BLOOD SUGAR, URIC ACID UREA NITROGEN AND CREATININ THE CARBON DIOXID COMBINING POWER OF BLOOD PLASMA, AND THE RATIO OF UREA OF BLOOD AND URINE AS WELL AS PHENOLSULPHONEPHTHALEIN EXCRETION

Day in December 1915	Sugar	Uric Acid Mg per 100 c c	Urea Nitrogen Mg per 100 c c	Creatinin Mg per 100 c c	Carbon Dioxid		Ambard Ratio	Phenolsulphonephthalein
					C c.	Mg		
1	0 18	6 5	97	17 5	0.36	0 50		0
4	0.225	6.4	129	21.5	0 33	0 44		0
7	0 18	6.3	129	21.8	0.35	0 48	1.56	0
10	0 22	7 0	132	22 3	0.38	0 53		0
14	0.21	6 1	144	28.9	0.36	0 50		
17	0 20	5 6	150	24 2	0 27	0.33		
21	0 18	5 0	188	28 6	0.30	0.38		
24	0.24	7 7	200	26 7	0.24	0.27		

The blood examination revealed a secondary anemia with hemoglobin 35 per cent, erythrocytes 2,800,000, and a normal white cell and differential count. The urine excreted in twenty-four hours was 2,200 c c., with specific gravity 1 010, *no albumin and no casts The percentage of chlorid and* nitrogen was not determined No phenolsulphonephthalein[1] was demonstrated in the urine The chemical examination of the blood revealed a retention of the nitrogen[2] constituents as shown in Table 1 The urea nitrogen was 97 uric acid 6 6, creatinin 17.5, blood sugar 0 18, blood plasma carbon dioxid combining power 0.36 c c., or 0 50 mg

Treatment and Course—Because of these findings, he was continued on a carbohydrate diet[4] of cane sugar 250 gm and water 1 liter, and three days later a second examination of the blood was made This showed an increasing retention of urea to 129, and creatinin 21 5, in spite of the absence of nitrogen intake The carbon dioxid combining power of the blood plasma had diminished to 0 33 c c., or 0 44 mg There was no excretion of phenolsulphonephthalein on repeated tests

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* From the Medical Department of the New York Post Graduate Medical School and Hospital.

[1] Frothingham, Fitz Folin and Denis The Relation between Nonprotein Nitrogen Retention and Phenolsulphonephthalein Excretion in Experimental Uranium Nephritis Arch. Int. Med., 1913 xii 245

[2] Myers V C., Fine M S with the cooperation of Lough W G The Significance of the Uric Acid Urea and Creatinin of the Blood in Nephritis Arch Int. Med 1916 xvii 570

[3] Frothingham, C., and Smillie, W G The Relation between the Phenolsulphonephthalein Excretion in the Urine and the Nonprotein Nitrogen Content of the Blood in Human Cases Arch Int Med., 1914 xiv 541

[4] Frothingham C and Smillie W G A Study of Different Nitrogenous Diets in Chronic Nephritis Arch Int Med 1915 xv 204

Satisfied that his condition was desperate,[5] because of the marked retention of nitrogen in the blood, I considered a functional test of the kidneys, such as suggested by Mosenthal,[6] to be contraindicated, and was contented to have examined the two-hour specimen for volume, specific gravity, percentage of sodium chlorid and nitrogen, and the presence of albumin or casts (Tables 2 and 3) This examination showed an increased amount for the night urine, but this should not be emphasized, since he was permitted fluid whenever he wished and, as his nights were restless, he drank considerable The inability of the kidneys to concentrate was shown by the specific gravity of the specimens, which was low, varied only slightly, and diminished as death approached The low percentage of chlorids might be due to the salt-poor diet to which he was restricted, as well as to the fact that he had been so restricted for five months The nitrogen percentage remained low, even after increased intake

TABLE 2—SHOWING AMOUNT OF URINE VOIDED IN TWO HOUR PERIODS AND THE LOW, SLIGHTLY VARYING SPECIFIC GRAVITY, AND PERCENTAGE OF SODIUM CHLORID AND NITROGEN (DEC 9, 1915)

Time	Urine, C c	Specific Gravity	Sodium Chlorid		Nitrogen	
			Per Cent	Grams	Per Cent	Grams
8 to 10	500	1 010	0 30	0 150	0 44	0 220
10 to 12	130	1 008	0 40	0 520	0 39	0 507
12 to 2	160	1 008	0 30	0 480	0 41	0 656
2 to 6	350	1 010	0 35	1 225	0 42	1 470
6 to 8	165	1 010	0 35	0 577	0 43	0 709

After three days more of nitrogen-poor[7] diet, the blood examination showed the urea nitrogen to be 129 mg, uric acid 6 3, creatinin 21 8, blood sugar 0 18, carbon dioxid combining power of the blood plasma 0 35 c c, or 0 48 mg The restriction of his nitrogen intake was continued, and on December 10 examination of the blood showed the figure for urea nitrogen to be 132 mg, uric acid 7, creatinin 22 3, blood sugar 0.22, carbon dioxid combining power 0 38 c c, or 0 53 mg It is quite noteworthy that following the restriction of diet there was a slight rise in the carbon dioxid combining power, though an increased retention in the blood of urea and creatinin Because the urea nitrogen had increased, the nitrogen-poor diet was continued, and on December 14 the blood examination showed urea nitrogen 144, uric acid 6 1, creatinin 28 9, blood sugar 0 208, carbon dioxid combining power of the blood plasma 0 36 c c, or 0 50 mg

It was now quite evident the patient's condition was becoming more serious, for the nitrogen was increasing and the carbon dioxid blood plasma combining power was diminishing He had been on a protein-poor diet for fourteen days, and though the retention of nitrogen had continued to increase, it seemed unwise not to allow a small amount of protein to spare the body tissues, therefore he was permitted a diet containing some protein, though the nitrogen intake was still kept low, 30 gm of protein with nitrogen content of 4 8 gm and 1,800 calories On December 17 the blood examination showed urea nitrogen 150, uric acid 5 6, creatinin 24 2, blood sugar 0.20, carbon dioxid combining power of blood plasma 0 27 c c, or 0 33 mg The restricted nitrogen intake was continued and on December 21 the blood examination showed urea nitrogen 186 mg, uric acid 5, creatinin 28 6, sugar 0 184, carbon dioxid combining power 0 30 c c, or 0 38 mg During the night of December 21 he had a profuse epistaxis and began to complain of precordial pain On palpation over the second, third and fourth left interspace in the parasternal line, one could feel a friction rub, and on auscultation a to-and-fro friction sound could be heard The venous pressure at this time had evidently increased, as shown by the marked engorgement of all the veins of the extremities The pulse rate increased somewhat over 100, and the temperature rose from 96 4, which it registered on December 20, to 98 6 On December 24 the blood examination showed urea nitrogen 200, uric acid 7 7, creatinin 26 7, blood sugar 0 236, carbon dioxid blood plasma combining power 0 24 c c, or 0 27 mg

This examination showed the most critical condition, and death followed, December 25, at 10 40 a m, without coma or convulsions, but with a very rapid failure of the heart, which was evident for about an hour and a half before death

The pulse rate remained about 80 until December 23, when it began to increase and rose to 100, coincident with the development of his pericarditis The rate of 100 to 110 was maintained until just before death, when it reached 120, and later became imperceptible at the wrist The temperature remained about 98 until December 20, when it gradually sank to the point of 96 6, and on December 21 reached 96 4 Then with the onset of his pericarditis it gradually rose to 98 6, which it reached at the time of his death Respirations were usually 18 to 20, except during the periods of sleep, when they rose to from 30 to 36, and were accompanied by vigorous twitching of the legs and arms, but at no time was there a Cheyne-Stokes phenomenon

The intake of fluid varied between 1,000 and 2,500 c c, and the output reached as high as 2,100 c c, the amount usually being between 1,100 and 1,700 c c, until the day before death, when it sank to 500 c c, and this was obtained by catheterization, as he was unable to void during the last forty-eight hours Twice during the period of observation he vomited, and there were several watery bowel movements in the day Aside from the increasing uremia, this was unaccounted for

The blood pressure when he first came under observation was, systolic 270, diastolic 140 mm of mercury, with a pulse frequency of 80, gradually diminishing to systolic 215, diastolic 110, about December 10 Then the diastolic pressure rose to 130, systolic remaining at 220, until December 16, or nine days before death, when the systolic fell to 190 and the diastolic to 110 mm of mercury, remaining so for two days On December 18 the systolic pressure rose to 225 and the diastolic to 130 mm of mercury, again gradually diminishing until December 24, when the systolic registered 175 and the diastolic 90 With the onset of the pericarditis there was a marked rise in the venous pressure

Shortly after entering the hospital he began to have attacks of epistaxis, which were easily controlled by ice water applied to the face, until December 21, when he had a profuse hemorrhage Subsequent to this the pericarditis became evident and the next day, December 23, he complained of a pain in his chest, and the same day the palate and uvula became edematous

TABLE 3—SHOWING AMOUNT OF URINE VOIDED IN TWO HOUR PERIODS AND THE LOW, SLIGHTLY VARYING SPECIFIC GRAVITY, AND PERCENTAGE OF SODIUM CHLORID AND NITROGEN (DEC 13, 1915)

Time	Urine C c	Specific Gravity	Sodium Chlorid		Nitrogen	
			Per Cent	Grams	Per Cent	Grams
8 to 10	115	1 008	0 35	0 402	0 40	0 400
10 to 12	150	1 000	0 35	0 525	0 39	0 585
12 to 2	190	1 008	0 35	0 665		
2 to 4	50	1 005	0.30	0 150	0 30	0 150
4 to 6	170	1 003	0.35	0 595	0 30	0 612
6 to 8	180	1 008	0.30	0 540	0 35	0 630

The first chemical examination of the blood (Table 1) shows urea nitrogen, uric acid, creatinin and sugar to be well above normal, and the combining power of the blood plasma to be at the low figure of 0 5 As subsequent examinations were made, each one of these figures showed a progressive impairment of his metabolism, as indicated by the increasing retention of nitrogen and decreasing combining power of the blood plasma Of four tests of the phenolsulphonephthalein, after only one was a trace of the dye found in the urine, the others being absolutely negative The ratio between the urea in the blood and the urea in the urine, as suggested by Ambard, gave a figure of 1 58, while with McLean's index[8] the figure of 0.27 was obtained, both showing very strikingly the impaired secretory power of the kidney

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[5] Myers, V C, and Lough, W G The Creatinin of the Blood in Nephritis Its Diagnostic Value, Arch Int. Med, 1915, xvi 536

[6] Mosenthal, H O Renal Function as Measured by the Elimination of Fluids, Salts and Nitrogen, and the Specific Gravity of the Urine, Arch Int Med, 1915, xvi, 733

[7] Denis, W J Effect of Ingested Purins on Uric Acid Content of the Blood, Jour Biol Chem, 1915, xxiii, 147

It is particularly interesting to note that during the time he was on the nitrogen-poor diet the creatinin jumped from 17.5 to 21 5 and remained at that figure for six days, subsequent to which it made a further increase to 28 9, at which point it remained until the day before death The same temporary cessation of retention is shown in the urea figures, which for a week subsequent to the nitrogen-free diet remained almost stationary, but subsequently increased very rapidly, reaching the high point of 200 the day before death

SUMMARY

A case of chronic nephritis with hypertension is described in which the following history was traced

1 The respiration rate was of an unusual periodic type, increasing during sleep to almost double the frequency of the waking period, but not of the Cheyne-Stokes or Biot type, though uremia was the cause of death

2 The blood sugar and the blood nitrogen, as well as the carbon dioxid combining power of the blood plasma, are shown as indicating the condition and course of the disease

3 The absence of phenolsulphonephthalein excretion, together with other urinary findings, are recorded

4 Though the arteriosclerosis, retinal changes and high pressure were extreme, there was the physical evidence of only the slightest hypertrophy of the heart

5 Two days before death a profuse epistaxis occurred, followed by edema of uvula and palate and the development of fibrinous pericarditis

CONCLUSIONS

1 With the examination of the urine only, the seriousness of this patient's condition would not have been discovered

2 The phenolsulphonephthalein excretion test is of value to indicate the status praesens of the patient, but the amount of urea and creatinin in the blood, particularly the latter, give a definite clue to the progress and prognosis

158 West Fifty-Eighth Street.

Preservative Value of Cleanliness.—Modern bacteriology has placed on cleanliness a preservative value which may appear surprising in respect to its efficiency, particularly in conjunction with low temperatures which inhibit the development of micro-organisms detrimental to foods As an example of what such sanitary precautions can accomplish in the case of readily deteriorating milk Sherman states that 'three American dairy farms exhibited raw milk at the Paris Exposition of 1900, one of them sending weekly shipments throughout the summer, each of which was kept on exhibition in the raw state without spoilage until the next shipment arrived It was difficult to convince the jury of European experts of the fact that 'cleanliness and cold' were the only preservatives needed to accomplish the keeping of raw milk in a fresh sweet condition for two to four weeks in midsummer' Precisely such methods combined with modern transport facilities have made it possible to extend the range of milk supply in our large cities literally hundreds of miles and to bring an indispensable food at a reasonable price into every home. There is, indeed, a profound difference between marketing milk in the familiar manner now practiced and the older mode of distribution when goats or cows were driven in front of the home to be milked there.—Changes in the Food Supply and Their Relation to Nutrition, Lafayette B Mendel

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[8] McLean Franklin C Clinical Determination of Renal Function by an Index of Urea Excretion, THE JOURNAL A M A Feb 5 1916 p 415

THE EXAMINATION OF NORMAL GASTRIC SECRETION BY THE FRACTIONAL METHOD

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In view of the peculiar advantages which might be gained from a study of the entire cycle of secretion during gastric digestion, a considerable number of both normal and pathologic stomachs have been analyzed at the Wesley Hospital during the last eighteen months, according to the method of Rehfuss As the result of this work, it is believed that the method of fractional gastric analysis offers the only logical method of examination for determining the true secretory and motor state of normal and abnormal stomachs, and that consequently it should replace the older stomach tube method, by which merely the momentary secretory and motor condition can be estimated

In all, about 150 cases have been examined by the fractional method These include a normal series on proved healthy medical students and nurses, and an abnormal series on private and clinical hospital patients The clinical diagnosis in the pathologic series, based on the symptoms, physical examination, laboratory and Roentgen findings, was checked in a large number of cases by a pathologic diagnosis at operation

The technic employed was that of Rehfuss with a number of changes and additions In all cases the tube was first inserted into the twelve hour fasting stomach, the entire content being removed, measured and examined for free hydrochloric, lactic and total acidity, and for mucus, bile and food particles A straight Ewald meal consisting of two slices of bread and two glasses of water was immediately introduced into the empty stomach and the tube reinserted At fifteen minute intervals, 5 c c specimens were withdrawn until the specimens were macroscopically free from food particles and until the free and total hydrochloric acid had returned to approximately their relative positions as found in the fasting content Care was exercised against the swallowing of mucus throughout the examination, and the individual was protected as far as it was possible from all forms of psychic stimulation, especially that of the sight or smell of food Titration was performed with tenth normal sodium hydroxid Phenolphthalein was used as indicator for total acid, and dimethyl-amidoazobenzol for the free acid

In this way a curve was constructed, beginning with the fasting content, and on fifteen minute analyses after the administration of the Ewald meal until the aspirations showed no further food remnants or until the secretion had returned to that of the fasting state

Only by this method of introducing the test meal into the empty stomach can the true appetite secretion, or with this lacking, the secretory response to food stimulation, be ascertained

In the normal series, consisting of twenty-four cases, care was taken to select only those subjects who were free from both general and gastro-intestinal abnormalities so far as history and physical findings disclosed In six of the series a second analysis was run under as nearly the same conditions as the first as possible, in order to determine whether repeated examinations of the contents of the same stomachs would give the same secretory curve At least two weeks elapsed between the first and the second analysis in all cases

Table 1 gives the results of analysis of the residuum in the series of twenty-four fasting stomachs Summarized, the highest total acidity was 40 in terms of tenth normal sodium hydroxid, the lowest was 5, with an average of 17 The highest free hydrochloric acidity was 30, while in 62 5 per cent the residuum contained no acid, giving an average of 6⅜ free acid for the series The greatest quantity was 210 c c, the smallest 5 c c, with an average of 48⅙ c c Bile was present in the residuum in 41 66 per cent of cases

The surprising feature in this as in the Rehfuss series is the quantity of residuum which may be found in the normal fasting stomach by this method as compared with former ideas of the boundaries of normal, ranging for 20 to 60 c c, according to various authorities "The old tube which is propelled from above has its position always fixed", consequently, if either too little or too much tubing is introduced, the eye of the tube, being above the most dependent portion of the greater curvature, is unable to take up the entire amount of residuum The eye of the Rehfuss tube, on the other hand, seeks the most dependent portion of the greater curvature by gravity, and remains in this position for a considerable time, as I have repeatedly proved by passing the tube before the fluoroscope and allowing a stream of bismuth suspension slowly to pass through the tube and settle along the floor of the stomach Since the olive of the Rehfuss tube seeks the most dependent portion, it would seem quite an unnecessary procedure to aspirate with the patient standing or lying in the various postures, recommended by Rehfuss, unless an actual deformity were present in the contour of the stomach

TABLE 1—RESIDUUM IN TWENTY FOUR NORMAL FASTING STOMACHS

Number	Total Acid	Free Acid	Quantity, c c	Residue
1	15	9	10	Clear
2	5	0	18	Bile tinged
3	8	0	35	Bile tinged
4	9	0	30	Bile tinged
5	22	15	25	Clear
6	22	12	30	Clear
7	10	0	5	Clear
8	35	19	50	Clear
9	30	18	40	Clear
10	10	0	30	Bile
11	6	0	18	Clear
12	10	0	35	Clear
13	27	18	125	Bile
14	28	21	130	Clear
15	40	30	35	Clear
16	20	8	50	Bile
17	12	0	90	Bile tinged
18	6	0	15	Clear
19	5	0	28	Bile
20	12	0	32	Clear
21	20	0	65	Bile tinged
22	12	0	10	Clear
23	18	0	210	Bile tinged
24	16	0	50	Clear

In Table 2 are recorded the essential features of the curves of secretion in the normal series

A detailed study of the various normal charts, in the vast majority of cases, will show a considerable drop in both the total and free acid values at the first fifteen minute period as compared with the fasting residuum This abrupt fall is undoubtedly due to the dilution of the appetite secretion by the Ewald meal In seventeen of the cases, either the total or the free or both waves began to ascend within the first fifteen minutes, in four cases the rise began during the thirty minute period, in two cases in forty-five minutes and, in one, only at the end of one hour Consequently it will be seen that in six instances in the series, there was either no appetite secretion evoked by the Ewald meal or that the reaction to the psychic stimulation was too slight to overcome the diluting action of the meal, and that the beginning of the wave occurred only as the result of the food stimulation

The curves resulting from the absence or diminution of the appetite secretion closely resemble the delay of the secretory waves observed in the pathologic series in three chronic alcoholic gastritis cases with associated portal congestion

TABLE 2—ESSENTIAL FEATURES OF THE CURVES OF SECRETION IN THE NORMAL SERIES

No	Beginning of Rise	Time of High Point	Height in N/10 NaOH	Character of Wave	Empty of Food	End of Test	Gastric Cycle	Acid
17	60 *0	1 30 1 45	60 50	Acute Acute	2 00	2*	Complete	
10	45 60	1 30 1 30	50 28	Curve Plat	not at 3 00	3	25 c c Small amt of food	38 24
11	30 30	1 15 1 30	72 48	Acute Curve	2 00	2	Complete	
12	15 15	1 45 1 45	72 62	Acute Acute	2 45	3	Complete	
13	15 45	60 1 30	34 40	Plat 1½ hr Plat	2 45	3	Complete	
14	15 15	1 15 45	78 28	Acute Plat	2 30	3 30	Complete	
9	30 30	1 45 1 45	58 32	Acute Plat	2 30	3	Complete	
3	15 30	1 15 1 15	38 26	Curve Apex	1 45	1 45	Complete	
4	30 30	1 15 1 15	52 24	Curve Plat	2 30	2 30	Complete	
15	15 30	1 15 1 15	98 76	Acute Apex	1 45	2	40 c c. Clear	82 70
16	30 30	2 15 2 15	114 100	Acute Apex	2 15	3	35 c.c Clear	82 42
8	15 15	1 15 1 15	75 54	Acute Apex	1 45	1 45	Complete	
1	15 15	1 30 1 30	45 38	Acute Apex	2 00	2	Complete	
5	15 15	2 00 1 30	65 46	Acute Plat	2 30	2 30	Complete	
2	15 15	60 1 45	60 80	Curve Plat	3 00	3	60 c c Clear	34 14
7	0 0	1 15 1 15	68 28	Acute Plat	2 00	2 30	Complete	
6	15 15	1 15 1 15	50 28	Acute Acute	2 30	3	Complete	
18	0 15	60 45	54 26	Acute Curve	2 00	2 30	Complete	
19	15 30	1 30 1 15	38 18	Plat Plat	1 45	3	Complete	
20	15 30	1 30 1 30	50 40	Acute Acute	1 45	2 15	Complete	
21	15 30	1 45 2 00	36 18	Grad Plat (1 hr)	2 00	2 30	Complete	
22	45 45	1 30 1 30	46 34	Plat Curve	2 15	2 30	Complete	
23	30 45	1 15 1 30	50 36	Plat Curve	2 30	2 45	Complete	
24	15 45	1 45 1 45	38 18	Plat Plat	2 15	2 30	5 c c only aspirated	40 22

* Empty

The varying effect which the Ewald meal may produce on the appetite secretion in different individuals, and its consequent effect on the character of the secretory curve, should not be overlooked

In not a single instance in the normal series did we record the early steep rise of either free or total acid, classified by Rehfuss as the hypersecretory type of normal curve This form of curve, however, is frequently seen in pathologic cases, and the steep ascent is called an "irritable rise," since these cases almost without exception have shown a high free hydrochloric acid secretion in the fasting stomach

In summarizing the time of occurrence of the high point in secretion in the series, it will be seen that in the case of the free acid, this occurred in twenty of the twenty-four cases between the one hour and fifteen minute and one hour and forty-five minute periods, with the greatest number occurring at one hour and a half, and that in not a single instance did it occur at the one hour period, the conventional time for removing the Ewald meal, with the old tube On the other hand, in two instances the high point was attained in forty-five minutes In general, the same holds true in the case of the high point of the total acid curve, this occurring in nineteen of the twenty-four cases between one hour and fifteen and one hour and forty-five minutes, with the greatest number at the one hour and fifteen minute period, and with but three instances in which the high point was at one hour That the high point of both curves tends to occur at a later point than the one hour period is even more strikingly demonstrated in the pathologic series, in cases showing some form of continued gastric irritability It is improbable that any abnormal delay in the occurrence of the high point of secretion was caused by the introduction of the test meal into the empty rather than the fasting stomach, since in fifteen of the twenty-four cases the fasting stomach showed no free hydrochloric acid which might have hastened the secretion, and since in the vast majority of cases the secretory response occurred at the normal time

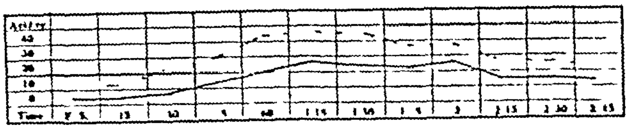

Chart 1 —Composite curve made by plotting the average acidity of the twenty four normal stomachs at each fifteen minute period broken line total acidity solid line free acidity F S fasting stomach

The high point of secretion varied from forty-five minutes to two hours and fifteen minutes after the test meal was taken Since it is not at all unusual to see a difference of 30 or even 50 in acid concentration in a single fifteen minute period, the fallacy of attempting to determine the true secretory state of a stomach by the analysis of a single specimen taken at a fixed time is evident In the pathologic series there are many curves, showing a normal or hypoacidity at one hour, which at one hour and fifteen minutes or one hour and a half show a marked hyperacidity, consequently it would seem that a hypothesis is erroneous which assumes on the basis of a single one hour analysis that a hyperacidity history with a hypoacidity finding is pathognomonic of an ulcer, since at one hour and a half there may be enough free acid present to cause this picture, especially if the acid is acting on a hypersensitive mucosa

In eighteen cases of the normal series, the free acid ranged between 20 and 60 with an average of 35½ In one instance the free acid attained a height of 100 without producing symptoms The height of the total acid curves ranged between 36 and 114, with the greatest number falling between 50 and 80

An examination of the general character of the secretory curves shows that there is no one form of curve which is common to all normal stomachs, although in general the vast majority of the normal series bore certain similar characteristics The pause before the evident secretory response, usually occupying the first fifteen to thirty minutes, was followed in most instances by a gradually ascending limb, the total acid curve usually rising first and diverging from the free wave The summit of the ascending limb most frequently occurred in from seventy-five to ninety minutes In one half of the series, the summit of the curve was sustained for from thirty minutes to two and one-half and even three hours, while in the other 50 per cent of cases, a more or less acute summit was followed by relatively short descending limbs which tended to converge Although we believe that Pawlow, Carlson and others have practically established the fact that normally "the gastric acid, as it flows from the glands, possesses a constant acidity," we do not believe that Rehfuss has substantiated this fact in his experiments The determining factor as to whether the summit of a curve is sustained or abrupt is entirely dependent on the duration of the balance between the intensity and duration of acid secretion, food fixation and the emptying power of the stomach, and consequently a plateau curve is evidence only of a sustained equilibrium, and is no proof of a secretion of a uniform concentration

In a number of cases, a temporary secondary rise of the curve took place after the stomach was empty of food, and apparently after the digestive cycle had been completed This secondary rise usually occurred within the first thirty minutes after the return of the acidity of the secretion to that of the fasting stomach, but it has been noticed as late as one and one-half hours after the apparent completion of the digestive cycle We attribute this secondary rise, which has been seen so frequently in the normal series, to a fluctuation in the rate of the continued secretion, during the period of cessation following the gastric cycle, rather than to mechanical irritation incident to the presence of the tube

The motor power as demonstrated by the disappearance of all food particles from the fifteen minute samples was very uniform in the normal series In twenty of the twenty-four cases, the stomach was empty in from one hour and forty-five minutes to two hours and a half The emptying time was evidently unaffected by the duration of the pause before the secretory response, and by high concentration of the hydrochloric acid secretion In one case in which the secretory response was delayed for one hour, the stomach was empty in two hours, while in another case in which the response occurred during the first fifteen minutes, the stomach was not empty for three hours In the case in which the free acid attained a height of 100 the stomach was empty of food in two hours and fifteen minutes, showing that a high acid concentration per se in this case at least produced no delay in the emptying time In only a very few instances did the presence of the tube cause gagging, and in these cases only during the first five or ten minutes, so that motility was probably not reduced by nausea

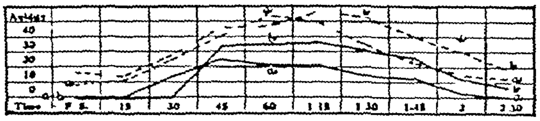

Chart 2 —Two curves from the same stomach with sixteen days intervening broken line total acidity solid line free acidity arrow empty of food F S, fasting stomach

The results of second examinations of the content of the same stomachs showed that although a normal individual will not always give exactly the same curve, the general main characteristics of the curve are identical The fasting residuum in both analyses gave total and free acidity of almost the same concentrations The high points of the waves occurred in practically every instance at the same time, were approximately of the same height and were generally of the same character, whether acute, rounded or plateau The greatest difference in emptying time in the two analyses was forty-five minutes, and this occurred in but one case The main difference in the contour of the curves was apparently caused by a variable response to the appetite stimulation

CONCLUSIONS

As the result of this work, we believe that the fractional method of gastric analysis should replace the old tube method

The true secretory curve of digestion can be determined only if the test meal is introduced into the empty stomach

A much larger quantity of residuum may be obtained from the symptom-free fasting stomach by the Rehfuss tube than was formerly considered to be within the limits of normal

The intensity of appetite secretion is variably influenced by the Ewald meal in different normal individuals

The difference in the time of occurrence of the high point of secretion and the rapidity of the change in acid concentration make it impossible to determine the true secretory state of a stomach other than by the fractional method of analysis

A plateau type of secretory curve is no proof of the secretion of an acid of uniform concentration

There is no one form of secretory curve common to all normal stomachs, although the vast majority of normal curves have certain characteristics in common

The contour of a given normal curve is dependent on the following main factors—the intensity and duration of appetite secretion as influenced by the test meal, the amount of gastric mucus, the concentration of food secretion, and the emptying time of the stomach

The emptying time of the normal stomach is fairly uniform

Many phenomena associated with the normal gastric cycle of digestion as determined by the fractional method of analysis have yet to be explained

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Psychology of the Witness—The reports of the witness are always combinations of objective and subjective factors Emotions, decisions, thoughts, may influence his account of the past experience, and, even where the interest is entirely devoted to the external stimuli, the subjective apprehension and attention must play a role It is possible that the original sensory perception was defective, or, secondly, that the apprehension at the time of the perception was erroneous Thirdly, the disposition for the memory images may have changed in the course of time so that a correct reproduction has become impossible Fourthly, the will to reproduce the memory ideas may not have been intense enough to overcome suggestions or autosuggestions or to secure completeness Finally, the witness may have lacked the ability to express his ideas correctly Only if the process were free from disturbances at all these points can the testimony count as an objective report Each of these sources of mistakes can be examined by the psychologist It is clear, however, that three different types of psychological facts must be considered —Psychology General and Applied, Munsterberg

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LAMINECTOMY WITH SIMPLE EXPOSURE OF THE SPINAL CORD

ITS EFFECT ON THE REFLEXES AND ON THE SYMPTOMS OF SPINAL DISEASE *

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We feel that the time has come for a distinction to be made between those laminectomies in which the operation relieves pressure exerted on the spinal cord, by tumors, by collections of fluid or in other ways, and those in which there are no evidences visible at the operation of any compression of the spinal cord Hitherto, all such operations have been grouped under the general term of spinal decompression

In 1912, we published a report of seven cases of spinal disease, in which great improvement followed the removal of the spinous processes and laminae, with incisions of the dura Since that publication, we have had eight additional cases, and the course in all of them was profoundly influenced by the operative interference The title of that paper was "Spinal Decompression," but in only two of the cases was any actual increase of intradural pressure found, in these two, we naturally inferred that the improvement which followed the primary operation was due to the relief of intradural pressure after the free removal of spinous processes and laminae, with incision of the dura The improvement in the others, however, and in eight cases which we have had since, could be attributed to no such cause, for there was no compression of the cord

The present paper concerns itself exclusively with the cases in which there is no compression and in which the exposure itself is the only agency which can account for the change in the symptoms which so frequently follows the operation In this paper, therefore, in which we make use for the first time of the title of "Laminectomy with Exposure of the Spinal Cord," we shall limit ourselves to the considerations of the effects of spinal exposure in such cases of spinal disease in which there is no demonstrable increase of intradural pressure

The postoperative results have been so striking that the conclusion is unavoidable that surgical exposure of the spinal cord, even in the absence of increased intradural pressure, may of itself effect some change on the spinal cord which benefits or checks the symptoms of certain forms of spinal cord disease, and we feel that the procedure merits a name to distinguish it from laminectomies which relieve pressure

It is not always possible to determine before the exposure is actually made whether or not there is pressure to be relieved Consequently, the term "laminectomy with exposure" can be used with certainty only after the operation is completed We have no final physiologic explanation of the phenomena which follow such operations, although we shall suggest certain possibilities

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* Read at the meeting of the American Neurological Association, Washington, D C, May 9, 1916

THE IMMEDIATE EFFECT OF LAMINECTOMY AND INCISION OF THE DURA ON THE REFLEXES

As has already been pointed out by one of us,[1] laminectomy and incision of the dura often have an immediate effect on the spinal reflexes. In many cases the knee and ankle jerks become markedly depressed or disappear altogether within thirty minutes of the opening of the dura, and this depression or disappearance of the reflexes may persist for from six to twenty-four hours. These changes often affect all the spinal reflexes, whatever part of the spinal cord may have been exposed by the operation. We have seen the reflexes of both upper and lower extremities modified after an operative interference in the middorsal region, but more often the reflexes below the level of the operative exposure are affected.

These phenomena might be explained by trauma to the cord during the operation or by bleeding into the membranes. But often the diminution or loss of the reflexes occurs when the operation has been very simple without appreciable injury to the cord itself or bleeding into its membranes. Since a similar change in the reflexes may occasionally be observed after simple spinal puncture, it is fair to conclude that changes in intradural pressure conditions with resultant modification of the spinal circulation are the important etiologic factors. We have not observed these changes after operations in which the dural sac remained unopened, but a similar disappearance of the reflexes is often observed after severe trauma to the skull or spinal column.

It is more remarkable that pathologic changes in the reflexes, such as exaggeration of the knee jerks, ankle clonus and the Babinski phenomenon, which had existed, disappear and only the normal reflexes are obtainable for a number of hours or days after an operation on the spine which has consisted of a laminectomy and incision of the dura and at which *no* definite spinal lesion could be discovered. We have observed these changes in a large number of patients. One of us has performed an exploratory laminectomy in the upper dorsal region on a young woman who had symptoms of disseminated sclerosis with a distinct sensory level. The patient presented, among other physical signs, an inversion of the triceps reflexes, that is, percussion of the triceps muscle was followed by marked flexion at the elbow. After the operation, which failed to show any macroscopic abnormality, the normal triceps reaction (movement of extension at the elbow) returned.

In another patient, in whom the exploration failed to discover any lesion, ankle clonus, and the Babinski, Mendel and Oppenheim phenomena disappeared for thirty-six hours after the operation, during which period the reflexes were normal. We have twice, in cases of suspected multiple sclerosis, seen the abdominal reflexes return for twenty-four hours after an exploration. In one of the patients, horizontal nystagmus, which had existed before the operation, could not be obtained for more than one day after the surgical interference. Similar results have been obtained for motor power.

We recently operated on a man who had a spastic paraplegia of both upper and lower extremities with a marked stiffness of the neck, there were fleeting sensory disturbances affecting mainly the pain and temperature senses up to the level of the sixth cervical segment. In spite of the fact that the diagnosis of multiple sclerosis seemed most probable, an exploration was decided on. The surgical interference failed to demonstrate any macroscopic lesion of the cord, but a decided functional improvement occurred which lasted for almost two months before the former symptoms returned. After the operation, the movements of the neck were much more free. The fingers and the wrists, which before were held stiff and almost motionless, could be moved freely two weeks after the interference. The increase in the strength of both upper limbs was very distinct, and the strength of the hand grips became excellent. The patient was soon able to walk without a cane or other assistance, and whereas formerly he dragged his feet when he walked, he now lifted them quite normally. The spasticity had largely disappeared from the legs, although the knee jerks were still active, and clonus and the Babinski reflex existed. As stated above, the condition of the patient three months after the operation was as bad as before the laminectomy. We have seen this temporary improvement in several patients, and shall keep this patient under continual observation. In another one of our cases (Case 1 following), a second improvement began a few months later, and all of the symptoms of spinal cord disease disappeared within six months.

The exposure of the cord to atmospheric pressure and possibly to light must have a profound effect on the spinal circulation, and as a result, the irritability of the spinal tissue must be greatly modified. There can be no *direct* effect on the reflex centers (nerve cells) in the spinal cord because the changes in the reflexes occur both above and below the part of the cord exposed. For the same reason, the change cannot be due to a direct inhibition of the sensory parts of the reflex mechanisms. We are therefore forced to the *hypothesis of an increased inhibition from the brain* centers through the pyramidal tracts. This may be due to an increased irritability of the centrifugal fiber tracts. If the reflex stimuli which pass to the cord through the posterior spinal roots were activated and regulated by stimuli from higher centers, it is possible that a loss of such activation or stimulation might diminish the conductivity of the centripetal fibers in the posterior roots, which would then be followed by a diminution in the reflexes. All this is still in the realm of speculation, the problems form a promising field for experimental investigation.

EFFECTS OF LAMINECTOMY WITH INCISION OF THE DURA ON THE SYMPTOMS OF SPINAL DISEASE

In addition to the immediate and temporary modifications in the reflexes and motor power just described, there are other changes which are more permanent, and which we have observed after spinal operations in which nothing was found to explain the symptoms. Either the improvement has been immediate and marked, or an immediate improvement in motor and sensory disturbances was followed, in from one to two days, by a return to the conditions as they existed before the operation but with later gradual improvement, or a change for the better began a few weeks after the operation.

In several of the patients who were markedly improved, the indications for an operation were very indefinite and the operation was performed because we had had remarkable experiences in other patients In several of the patients, satisfactory evidence of a localized lesion was not obtained, and the operator was led to expose the part of the cord which seemed most affected by the disease Sometimes the operation was performed at the level of the greatest motor disturbance, at other times at the level of most marked sensory loss

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[1] Elsberg, C. A.: Tr. New York Neurol. Soc., Jour. Nerv. and Ment. Dis., 1911, xxxviii, 695.

The improvement has generally been gradual, extending over many months or years Within three months of the operation, we have seen exaggerated knee and ankle jerks return to the normal, and ankle clonus and the Babinski reflex disappear, at the same time that the spastic lower limbs gradually relaxed In the case of a patient with flaccid paralysis of the lower half of the body and the extremities of three months' duration, improvement began a few weeks after the operation Within six weeks the knee and ankle jerks had reappeared Eight months later much power in the limbs had been regained, and the patient was able to walk around with the aid of a cane The improvement is still continuing

Reports of three cases, typical of the results we have seen, are given in detail

REPORTS OF CASES

Case 1—(Med No 606, Surg, 249)—*Multiple sclerosis? Exploratory laminectomy, negative findings, temporary marked improvement in symptoms, relapse followed by improvement, and finally complete recovery*[2]

History—F L T, a clerk, aged 26, admitted to the service of Dr Bailey at the New York Neurological Institute, Sept 19, 1910, was an athlete, and declared that he had been perfectly well until about three months before admission Then he began to be unsteady on his feet, and this was soon followed by a numbness in his lower limbs The symptoms gradually grew worse, and he found that his lower extremities became tired on the least exertion At times he would have a tingling and burning sensation in his lower limbs He felt that the limbs were becoming weak and stiff He was in the hospital for one month during which time he was found to have a spastic paraplegia of the lower extremities without any sensory disturbances Wassermann tests of the blood and cerebrospinal fluid were negative, and the fluid was normal in all respects He left the hospital in October, but returned, December 4, with all of the symptoms aggravated At this time both lower extremities were very spastic, with exaggerated knee and ankle jerks, clonus and Babinski reflex The abdominal reflexes were wanting There was now a diminution of sensation up to the level of the twelfth dorsal spine, but tactile sensation was hardly, if at all, affected After a short stay in the hospital, he again left, only to return, Jan 8, 1911 The burning sensations in the lower limbs were worse, and were accompanied by shooting pain in the left groin, and the lower limbs were weak and spastic, so that he could hardly drag himself around with help There was some slight sexual disturbance The right lower extremity was now weaker than the left, both knee jerks were exaggerated, the right one more than the left Ankle clonus and the Babinski reflex were elicited on both sides, more marked on the right The abdominal reflexes could not be obtained There was a distinct but not well marked diminution of all three sensations below the level of the tenth dorsal segment, but tactile sensation was only very slightly disturbed, while pain and temperature were definitely diminished The case had been considered one of multiple sclerosis and not one for operative treatment, but the patient urgently requested that no matter how poor the outlook, he be given a chance by operation This was finally acceded to, and Dr Elsberg performed a laminectomy, January 20

Operation—The spinous processes and laminae of the seventh, eighth, ninth and tenth dorsal vertebrae were removed Incision of the dura and exploration failed to reveal anything pathologic, excepting for the fact that the cord was of somewhat irregular consistency The cardiac and respiratory pulsations were normal, and there was no excess of cerebrospinal fluid All sides of the cord were carefully investigated, but nothing abnormal could be discovered There were no adhesions between the membranes, and these seemed normal The wound was closed in the usual manner

Postoperative History—Recovery from the operation was without incident excepting for the presence of a very distressing hiccup for a few days The wound healed by primary union

One week after the operation, the patient could recognize heat and cold on all parts of both lower limbs, and the hypesthesia and the hypalgesia were much less marked He was able to move his lower limbs much more freely, a great deal of the spasticity had disappeared Knee jerks were only slightly exaggerated, and there were no clonus, and no Babinski phenomenon Three weeks later he could move his lower limbs quite freely, but the spasticity was more marked When the patient was discharged from the hospital two months later, his condition was the same as before the operation The lower limbs were again spastic, and he had exaggerated knee jerks, double ankle clonus and Babinski reflex The abdominal reflexes were present and equal on both sides Sensation was, however, normal over the entire body excepting for a small area of hypesthesia over the anterior surface of the left thigh and a very slight diminution of pain and temperature sense over the left lower extremity The sensory disturbances were, however, so slight that their extent could not be determined The case was now considered one of multiple sclerosis

For about two months after leaving the hospital, the patient's condition was not much changed Then improvement began and steadily progressed Within four months he was practically well, all signs of spasticity had disappeared, and the reflexes in the lower extremities were normal on the right but still slightly exaggerated on the left side When last seen (April, 1916) he was perfectly well and about to be married

Case 2—*Syphilitic disease of the spinal cord with flaccid paraplegia Exploratory laminectomy Very great improvement*

History—E D, aged 50, single, a patient of Dr James Pedersen, was seen by us in 1914 The patient contracted syphilis in 1896 and was thoroughly treated for two years In November, 1898, he began to notice a numbness in both lower extremities and began to have difficulty in walking Intensive antispecific treatment was again begun, and the numbness and weakness in the lower extremities disappeared gradually during the course of three months

In 1911 he developed diplopia and also began to have some difficulty in walking The diplopia cleared up after antispecific treatment with salvarsan, mercury and the iodids, but some weakness in the lower extremities persisted In September, 1914, the left lower extremity became rapidly worse Two months later both lower limbs were paralyzed, and the patient had lost all control of the bladder and rectum In spite of most energetic antisyphilitic treatment, the condition became steadily worse The Wassermann reaction was negative in both blood and cerebrospinal fluid

Physical Examination—Nov 18, 1914, the general condition was good The cranial nerves and upper extremities were normal The abdominal reflexes could not be obtained The cremasteric reflexes were absent The left lower extremity was completely paralyzed, on the right side, the patient was able to move his toes slightly Neither knee jerks nor ankle jerks could be elicited There was no Babinski or other pathologic reflex There was a very slight disturbance of all three sensations up to the level of the sixth dorsal segment The sensory loss was nowhere very distinct, but was more so on the right side than on the left, and the pain and temperature were more affected than the tactile sensation Deep muscle sense was normal The diagnosis of a localized degenerative process on a syphilitic basis was made The patient was informed that the outlook was very poor, but that we had seen beneficial results from decompressive laminectomy in this type of case, and that we considered the operation indicated

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[2] Reported in part in our previous paper

Operation—The patient was anxious to have everything tried, and after the matter had been explained to him, he asked to have a laminectomy performed This was done by Dr Elsberg, Nov 28, 1914 The spines and laminae of the fourth, fifth, sixth and seventh dorsal vertebrae were removed On incision of the dura a moderate amount of clear cerebrospinal fluid escaped The vessels on the posterior surface of the cord were distinctly enlarged There was no thickening of membranes or adhesion between them, no gross abnormality aside from a slight pinkish discoloration of the cord. The wound was closed in the usual manner

Postoperative History—Convalescence from the operation was uneventful The wound healed by primary union December 21 (four weeks after the operation), both knee jerks had returned, although they were elicited with difficulty and the right was more lively than the left The ankle jerks were present and weak and a Babinski reflex could be obtained on the right side There had been a considerable return of power in the lower limbs The patient could flex both lower limbs at the knee, but the left lower extremity was much weaker than the right Stroking of the abdominal wall elicited distinct abdominal reflexes Eight weeks after the operation the patient was so much improved that he could raise both limbs from the bed, but the left limb was much weaker than the right one

Four months after the operation, the patient was able to stand with assistance The left knee was still weak, and the patient was given an appropriate brace for support The power in the right lower extremity was almost normal The patient now had some control of the vesical and rectal functions The slight sensory disturbances which had existed before the operation had disappeared, and sensation was normal over all parts of the body

Ten months after the operation, the patient was able to walk around with assistance Extension at the left knee was still weak, so that the patient had to continue to wear a brace, but the power in the limb as a whole was much improved The vesical and rectal functions were normal The patient declared that he was improving slowly but constantly His only treatment consisted of massage, electricity and regular exercises

CASE 3—*Multiple sclerosis Exploratory laminectomy, great improvement*[3]

History—M M, aged 30 an Italian, was admitted to the New York Neurological Institute on the service of Dr Peterson, Dec 16 1914 Seven months before, the patient noticed that he was losing control of his bladder and that at times he was incontinent of urine This was soon followed by constipation and by loss of control of the anal sphincters after taking a laxative. About six months ago, his legs became weak and stiff The left limb was first affected, but the right leg soon became as bad as the left one The patient also noticed that he had a numb sensation on some parts of his lower extremities Walking became increasingly difficult on account of the stiffness of his lower limbs

Physical Examination—On admission, the patient presented all the signs of a spastic paraplegia, he was hardly able to drag himself along with the help of two canes Cranial nerves and upper extremities were normal The upper abdominal reflexes were present but weak, the lower abdominals and cremasterics could not be obtained The lower extremities were weak and spastic, the left more than the right The knee jerks were lively the left more so than the right, the ankle jerks were lively the left more than the right, double inexhaustible ankle clonus, and the Babinski and Mendel-Bechterew phenomena were present There was no loss of deep muscle sense in the lower limbs Tactile sensation was normal all over the body, there was a distinct diminution of the pain and temperature senses up to the level of the eighth dorsal segment The disturbance of sensation was most marked over the right lower extremity, and over some areas there was complete analgesia The sensory disturbance was most marked over the anterior surface of the body The Wassermann test and Roentgen-ray examination were negative

Operation—December 21, an exploratory laminectomy was performed by Dr Elsberg The spines and laminae of the fifth sixth seventh and eighth dorsal vertebrae were removed and the dura was incised There was free escape of cerebrospinal fluid No macroscopic change in the cord was observed, respiratory and cardiac pulsations were normal, the vessels were normal, there were no adhesions or other abnormality A probe was passed upward and downward in front of and behind the cord without meeting any obstruction The dura, muscles, fascia and skin were sutured in the usual manner

Postoperative History—Convalescence was uninterrupted, the wound healed by primary union

January 14, control of the bladder was much improved, the patient had good control in the daytime Sensation over the limbs was normal The upper abdominal reflexes were present, the lower right were present and weak, the left could not be obtained Power of extension and flexion of the lower limbs was now good The knee jerks were lively and equal double exhaustible ankle clonus was still present

March 11 the patient could lift both limbs from the bed equally well Walked around the ward without any evidence of spastic gait

From this time on the improvement was continuous The patient was presented at the meeting of the New York Neurological Society in February, 1916, as almost well His gait was normal, the power in the lower limbs was excellent, the reflexes were not exaggerated The abdominal reflexes were present and equal The patient stated, however, that he became tired very easily, and that at night he often had trouble with the bladder He was much satisfied with his walking

COMMENT

We shall not cite the histories of any other of our patients, but shall make those given above the basis for our comment

What possible explanation can there be for these remarkable postoperative results? We do not believe that the results were mere coincidences or that in the first patient we had to do with a case of multiple sclerosis in which, coincidently, a latent period of the disease had begun We have seen the effects described so often among more than 150 operations on the spine performed by one of us, that we have been forced to conclude that there was in our patients a direct connection between the laminectomy and the improvement We believe it possible that changes in the spinal circulation which follow a laminectomy may have a profound effect on early pathologic changes in the cord, and that the course of a spinal disease may be modified or halted by the operative interference We have not seen benefit in any patients in whom an exploratory operation exposed the conus and cauda equina This portion of the cord is very sensitive to changes in pressure, and bladder and rectal symptoms are so apt to occur as complications of the operation that an exploratory operation is justified only when strict indications for it exist In the cervical and dorsal regions, however, exploratory laminectomy may with less hesitation be performed in selected cases

CONCLUSIONS

1 The free removal of spinous processes and laminae with opening of the dura, in the absence of increased intradural pressure or a discoverable lesion,

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[3] We are indebted to Dr Peterson for permission to report this case.

may be followed by a disappearance of normal cutaneous and tendon reflexes for a number of hours, or may be followed by the temporary return to the normal of pathologic reflexes

2 The operation of laminectomy may have a profound effect in certain pathologic states of the spinal cord and may so modify or check the disease that a return to normal conditions is even possible

3 On account of the relative safety of laminectomy in experienced hands, except in the region of the conus and cauda equina, and for the reasons stated above, exploratory operations should be done more often

TRICHINOSIS AND THE CEREBROSPINAL FLUID

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It is now over two years since I demonstrated for the first time the *Trichina spiralis* in the cerebrospinal fluid, in a patient suffering from trichinosis[1] I then expressed an opinion that perhaps lumbar puncture may become a useful method for diagnosing this disease My hopes were fully realized Before this procedure can be a real factor in the diagnosis of this malady, however, the parasites must be found in the cerebrospinal fluid (1) sufficiently early in the disease and (2) with a fair degree of constancy My findings of the *Trichina spiralis* in the cerebrospinal fluid have recently been confirmed by Leon Bloch, Young and others It is noteworthy that in Young's case the parasites were readily demonstrable in the cerebrospinal fluid but not in the muscle tissue

I wish to add three more cases in which I found the *Trichina spiralis* in the cerebrospinal fluid I am indebted to Dr Moshkowitz for the cerebrospinal fluid The patients were all Italians and ate pork infected with *Trichina spiralis* twenty-one days prior to the lumbar puncture The cases developed into typical cases of trichinosis and showed the usual subjective and objective symptoms of the disease, including the eosinophilia

In performing the lumbar puncture every precaution was taken not to introduce into the trochar parasites which may happen to lodge in the muscle of the back The trochar was introduced with its stilet, and the latter was withdrawn only after the trochar was successfully introduced into the cerebrospinal canal The cerebrospinal fluid was collected into sterile test tubes

In appearance the three fluids differed in no wise from that of normal cerebrospinal fluid They were perfectly clear and contained no sediments Chemically only one out of the three fluids failed to reduce Benedict's solution, all showed a faint trace of albumin and no increased amount of globulin The specimens were centrifuged, and the sediments showed but an occasional lymphocyte and from one to four trichinae per field These embryos were fairly motile and retained this activity to some extent at the end of three days when kept in the cerebrospinal fluid at room temperature These embryos are not in the least affected when placed in normal urine, and have no effect on red or white blood cells in suspension

Should the trichinae be found in the cerebrospinal fluid with a fair degree of constancy, this method clinches the diagnosis rapidly, as but few other single procedures do

1352 Carroll Street

A CASE OF TRICHINOSIS WITH EMBRYO IN THE SPINAL FLUID

W T Cummins, M D, and G R Carson, M D,
San Francisco

History—G F, man, aged 39, Greek, laborer, was admitted, Feb 27, 1916 Family and previous personal history were negligible January 22 he, together with five associates in the railroad section gang, ate some undercooked pork The present illness developed thirty-two days later with pains and soreness in the flexor muscles of the arms and the calves of the legs No history of initial abdominal pains and diarrhea could be elicited On admission the muscular pains had increased in severity and had involved the muscles of mastication Moderate frontal headache was present

Examination—The patient was well nourished and well-developed There was no jaundice Moderate periorbital edema was present The pupils were normal The tongue was red, moist and clean There was slight dulness and roughening of breath sounds at both apexes The heart and abdomen were normal The spleen was not enlarged Pressure over the biceps and leg muscles elicited well marked soreness Urinalysis revealed specific gravity, 1 024, acid, albumin trace, glucose negative, phosphates, no casts Blood pressure was 140 mm systolic, and 90 mm diastolic

Treatment and Course—After two or three days the periorbital edema disappeared, but the muscular pains and soreness increased, now involving the thighs and buttocks From time to time there was some general abdominal tenderness There was no diarrhea prior to the administration of purgatives At the end of the third week after admission the patient was much improved so that there remained only slight tenderness of the biceps, calves and thighs

Temperature, on admission, was 100 6, and for ten days maintained an average evening reading of 102, when it fell to normal and then maintained an average thereafter of 99 (The maximum temperature was 104) The pulse was disproportionately low with an average of 95 during the highest temperatures, likewise, respirations, 21

Castor oil, 2 fluidounces, was given on admission Calomel and magnesium sulphate were given at intervals of a few days Salol, 5 grains, was given three times a day Free catharsis was maintained

Laboratory Examinations—The *Trichina spiralis* was not found in the feces on one examination during the period of catharsis and well marked muscular pains Only venous blood was examined during the fourth week, following the technic of Staubli, and was negative At this time several specimens of sedimentized urine were examined and were likewise negative The parasite was demonstrated in large numbers in the gluteus maximus muscle in the fifth week of the disease when there were definite muscular pains and tenderness

On admission, the leukocyte count was 10,400, and rose to a maximum of 13,400 three days later The minimum count was 7,900, six days later The patient was discharged apparently well after thirty days in the hospital, the eighth week of the disease, with a leukocytosis of 9,600 and eosinophilia of 28 per cent The maximum eosinophilia was 53 per cent

The cerebrospinal fluid withdrawn during the fifth week of the disease showed after an exhaustive search of several sedimentized specimens one sluggishly motile embryo of characteristic appearance Its length was 0 1 mm, breadth, 0 006 mm The parasite in places appeared finely granular The oblique, clear band, described by Stäubli, between the anterior quarter and the posterior three quarters was not observed The motility was a slow, rhythmic bowing of the entire body with a bending of one end and then the other The spinal fluid was clear and under a moderately increased pressure Cells 3, globulin (ammonium sulphate and butyric acid) negative At this time there was no headache and all reflexes appeared normal The Kernig sign was negative.

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[1] Van Cott, J M, and Lintz, William Trichinosis, The Journal A M A, Feb 28, 1914, p 680

COMMENT

Since in this case at the fifth week there were negative cytologic and chemical findings, and sluggish motility of the parasite, earlier examinations would appear advisable A routine spinal puncture (unless contraindicated) and neurologic examination of every trichinosis case may reveal much of interest in demonstrating the extent of parasitic migration into a hitherto unexplored field

Southern Pacific General Hospital

A CASE OF BETA-EUCAIN POISONING

T G Orr, M D Kansas City, Mo

The following case is reported from the Surgical Clinic of Dr M T Sudler, in the Bell Hospital, University of Kansas

A farmer, aged 60 admitted to the hospital for operation for double inguinal hernia and left hydrocele with negative family history and negative personal history except for occasional palpitation of the heart had had the left inguinal hernia for twenty-five years the right hernia for two years, and the left hydrocele for ten years

The patient was rather heavy and was healthy looking There were dilated venules on the face The right eye was artificial He had pyorrhea alveolaris The heart was irregular, with an extrasystole from every three to six beats The radial vessel walls were palpable The blood pressure was 160 There was a moderate cloud of albumin in the urine. There were double inguinal hernia and left hydrocele

On the day after admission under beta-eucain 0.25 per cent. anesthesia the Bassini operation for indirect inguinal hernia and operation for removal of the hydrocele sac were performed Twenty minutes before operation one-fourth grain of morphin was given hypodermically

The local anesthetic was administered in the usual way, and the hernia operation completed When the removal of the hydrocele sac was begun it was noticed that the patient had begun to perspire freely, and he soon began to complain of being tired When the patient left the table at 10 40 a m he was perspiring profusely and the skin had begun to feel clammy Respirations were now and then sighing in character The pulse was 88 and weak the respiration 20 and regular, except for interruptions by sighing At 11 30 the pulse was 84 and irregular the respiratory rate slow and irregular The venules of the face were much engorged The skin over the entire body was cold and clammy The pupils were contracted. Five minims of epinephrin chlorid were given in the vein which caused a transient increase in the strength of the pulse. The patient complained of pain in the head and abdomen At 12 o'clock it was impossible to feel the pulse, the respirations were of the Cheyne-Stokes type and at times there were intervals of almost a full minute without breathing Ten minims of epinephrin were then given, after which the pulse was 60 At 12 45 the pulse was 46 One one-hundredth grain of atropin was then given hypodermically One thousand cubic centimeters of saline were given intravenously with 15 minims of epinephrin At 5 30 p m the pulse was 46, and the patient's general condition somewhat improved though he complained of numbness of the left hand and foot At 7 p m he was more comfortable his pulse 64 At 8 30 p m. the pulse was 74 the respirations still of the Cheyne-Stokes type but the period of complete cessation of breathing was not longer than fifteen seconds At 10 p m., almost twelve hours after the onset of toxic symptoms, the pulse was 76 and of good quality and the respirations were 20 and regular The next day he had apparently completely recovered

The patient's improvement was uneventful until the fifth day after the operation, when at 2 o'clock in the morning, in the absence of the nurse, he sat up in bed to take a drink of water, and dropped back on his pillow dead The necropsy showed an embolus in the left coronary artery

The quantity of beta-eucain used in this case did not exceed 3 ounces of a 0.25 per cent solution Three ounces was the quantity placed on the instrument table for use If all of the solution had been injected into the tissues the quantity of the drug would amount to 3 4 grains When waste is considered, it is highly improbable that so much was actually absorbed by the tissues

Hertzler[1] states that beta-eucain may be used in quantities up to 3 grams, it is said, and as much as 15 grains have been used without alarming effects" Barker[2] reports the use of as much as 6 ounces of a 0 2 per cent solution of beta-eucain in a goiter operation without toxic effect M T Sudler has used as much as 5 ounces without causing any symptoms of intoxication

In a hurried review of the literature, I have found reference to six cases of intoxication due to beta eucain Way[3] reports a case of poisoning while doing a circumcision In his case, less than 2 grains were used Kraus[4] describes a case of poisoning from injecting 10 c c of a 2 per cent solution into a urethra the day following an internal urethrotomy, which caused very distressing toxic symptoms In the same article he refers to two cases reported by Marcinowski, one by Dolbeau, and one by Simon In one of Marcinowski's cases only a transient syncope was noted, and the patient was subject to fainting attacks In the other case after injection of 1 5 c c of a 10 per cent solution, the patient exhibited tonic and clonic spasms which gradually subsided after fifteen minutes, but were followed by stupor and weakness, the symptoms all passing away by the end of six hours Dolbeau's case was caused by the intravenous injection of the drug The case reported by Simon was characterized by transient headache and vomiting in a man whose bladder had been filled with 80 c c of a 4 per cent. solution for a Bottini operation

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W A PUCKNER, SECRETARY

GLYCOTAURO (See N N R., 1916, p 61)
The following dosage form has been accepted

Enteric Coated Glycotauro Tablets—Each tablet contains glycotauro 2 grains and is coated with salol. Prepared by Hynson Westcott & Co Baltimore Md

PETROAGAR—Each 100 grams contains petrolatum 0 72, agar 0.22, with powdered licorice, cocoa and oil of anise sufficient to flavor U S trademark applied for

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Prepared by H C Merker Co, Chicago Ill.

PETROBRAN—Each 100 grams contains petrolatum 0.74 bran 0.22, with powdered licorice and "oil of pineapple (ethyl butyrate) sufficient to flavor U S trademark applied for

(Accepted for inclusion with the appendix to New and Nonofficial Remedies)

Prepared by H C. Merker Co Chicago Ill.

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[1] Hertzler Local Anesthesia.
[2] Barker A. E. Practitioner, London September 1907
[3] Way Jour Roy Army Med. Corps August 1914
[4] Kraus Deutsch med. Wchnschr 1906

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SATURDAY, JUNE 10, 1916

THE FUNCTION OF THE OMENTUM IN PERITONEAL ABSORPTION

That substances in solution can be absorbed through the direct intermediation of the blood vessels from connective tissue interstices as well as from the larger spaces, such as the pleural and peritoneal cavities, has long been demonstrated beyond a doubt There was a time when it was assumed with considerable confidence that the drainage from such tissue spaces is essentially a function of the lymphatics arising from them It shall not be denied that the lymphatic circulation, sometimes even spoken of as the "absorbent system," may take part in this process of absorption But the process of lymphatic absorption, even when aided by active or passive movements, is a comparatively slow one and will scarcely suffice to explain the rapidity with which a poison in solution can be removed from a tissue space and distributed in the body so as to exert its toxic action after a brief interval When colored solutions are introduced into the peritoneal cavity, the dyestuff appears in the urine long before a trace of it can be detected in the lymph flowing from the thoracic duct Absorption and manifestations of the distribution of the substance taken up can be demonstrated even when the lymph is conducted to the exterior of the body or when its channels are obstructed In all such cases, then, the conclusion seems inevitable that absorption is by the blood vessels, and consists in an interchange between the circulating fluid of the vascular system and the extravascular medium

It has not been equally easy to explain the removal of particles, such as micro-organisms or foreign precipitated matter, from the larger tissue spaces Here, at any rate, it has seemed necessary to postulate the prominent cooperation of the lymphatics Thus studies on the mechanism of removal of granules from the peritoneal cavity have indicated the participation of the diaphragmatic lymphatics as the channel through which suspended particles reach the lymph glands, where they are commonly deposited The existence of peculiar stomata in the diaphragm has been debated, so that it has been necessary to relate the transport of suspended particles to the activity of migratory macrophages

Shipley and Cunningham,[1] of the anatomic laboratory at the Johns Hopkins University, have pointed out that the question of the omentum's share in ridding the peritoneal cavity of foreign substances has generally been evaded They state that those authors who admit the possibilities of the omentum as an absorptive pathway are unanimous in the belief that absorption of granules takes place by way of the omental lymphatics In the absence of definite knowledge of the facts of the case, they add, such a conclusion as regards the absorption of particulate matter is logical when we consider the part which lymphatic radicles play in the removal of granules from any locality, and the ease with which granular material injected into the peritoneal cavity may be recovered from the lymphatic glands It is by no means certain, however, that there are any lymphatics in the omentum at all

It is obviously not easy to establish the special role of the omentum as a seat of absorption because of the ease with which foreign matter in solutions and suspensions brought into contact with it can find its way to nearby absorbing surfaces Shipley and Cunningham have succeeded, however, in conducting experiments satisfactorily by withdrawing the omentum from the body cavity through a midline incision and keeping it immersed, under physiologic conditions, outside of the cavity in fluids which it was desired to study Possible participation of lymphatics, if such there are, was excluded by ligation of the thoracic duct Without giving the details of this novel investigation, it can be stated that true and pseudo solutions and granules of particulate material find their way through omental vessels to the organs of the body destined for their ultimate reception and storage or destruction and excretion, and the path by which they leave the omentum is not a lymphatic but a hemic one The Baltimore investigators further remark that the drainage of particulate matter from the serous cavities by way of the blood stream is most extraordinary, and was most unexpected since the blood vessel wall is not credited with permitting the passage of anything but fluids with a possible exception in the capillaries of the intestinal mucosa Lymphatic vessels could not be discovered in the omentum, and if they do exist they need play no important part in the actual drainage of the surrounding tissue space It is confidently believed that a considerable amount of granular material may leave the cavity of the peritoneum through the omental veins, though the limits of granular size and the mechanism of transit have not yet been ascertained

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[1] Shipley, P G, and Cunningham, R S Studies on Absorption from Serous Cavities, I, The Omentum as a Factor in Absorption from the Peritoneal Cavity, Am Jour Physiol, 1916, xl, 75

CHROMOPHIL TISSUE AND EPINEPHRIN

The suprarenal capsules of mammals consist of two parts, the cortex and medulla. With the latter of these structures the presence of epinephrin is associated. There are various other evidences that the cortical and medullary portions of the suprarenals represent distinct tissues differing in function. Portions of the medulla stain darkly with chromates, hence the designation of chromaffin or chromophil substance has been applied to the areas involved. Chromaffin tissue is found in various situations throughout the vertebrate kingdom. In some invertebrates chromaffin nerve cells occur. This has raised the question as to whether the production of the potent epinephrin is a characteristic of chromaffin tissues wherever it may be found, so that the histologic demonstration of the latter would be an indication of the occurrence of a substance having the unique pharmacodynamic action of the "active principle" of the suprarenal medulla.

The evidence of a common origin and similar physiologic effect of such tissues with similar staining reactions is accumulating. In some fishes the two portions of the suprarenal gland remain separated throughout life, the cortex being represented by a series of paired interrenal bodies lying on the front of the spinal column, and the medulla by a number of collections of chromaffin cells lying in close juxtaposition to the spinal nerves. Extracts of these chromaffin tissues behave like those of the suprarenal medulla when they are injected into the blood stream. The same is true of the masses of tissue found in close association with the sympathetic system, which present the chromaffin reaction typical of the medulla.

The most recent investigations in support of the provisional assumption that chromophil tissues are specific in their nature, and everywhere of the same essential character, relate to the retroperitoneal tissues in man and other animals. Fulk and Macleod,[1] of the physiologic laboratory at the Western Reserve University, have repeated earlier experiments of Biedl and Weisel indicative of the presence of an epinephrin-like constituent. By the use of the most recent technic involving the physiologic action of suspected extracts on intestinal and uterine muscle, the pharmacologic identity of the chromophil tissue has been further established.[2]

In view of the apparent connection between chromaffin nerve cells and those of the medulla of the suprarenal bodies, and the relation between the action of epinephrin and that of the sympathetic system, J. F. Gaskell[3] has suggested a possible interrelation. He imagines that the chromaffin nerve cells of the invertebrate are the common ancestors of the epinephrin-secreting chromaffin system and the sympathetic nervous system of the vertebrate. Thus we find the contractile vascular system regulated both by the sympathetic nerves and by the secretion of epinephrin.

THE NATIONAL DEFENSE BILL AND THE ARMY MEDICAL SERVICE

The national defense bill, signed by the president, June 3, fixes the proportion of medical officers at seven to each thousand of the enlisted strength of the army. This proportion, which existed at the outbreak of the Spanish War and was again restored in 1908, has been seriously reduced through gradual increase of the army, until the enlisted strength had grown 35 per cent. without the addition of a single medical officer.

The new law provides for a definite ratio rather than for a fixed number of medical officers. This will automatically prevent any changes in the ratio in the future. The period of service required of medical officers before promotion to the grade of captain has been increased from three to five years. The medical reserve corps is abolished one year after the passage of the act. Officers of the reserve corps may be appointed to the medical section of the officers' reserve corps, in which body commissions may be issued in three grades — lieutenant, captain and major. Officers of the dental corps are open to promotion to the grades of captain after eight years' service, and to that of major after twenty-four years' service, subject to the same examination conditions as obtain in the medical corps. Veterinary surgeons of the army are formed into a separate corps attached to the medical department, and are given promotion to the grade of major. The hospital corps is hereafter to be known as the enlisted branch of the medical department, and several new grades, such as master hospital sergeant and hospital sergeant, are created. Through a reduction in the proportion of privates first class in this department, the pay of 75 per cent. of the enlisted men in the medical service will be reduced from $18 to $16 a month. As the care of the sick is not particularly attractive work to the ordinary soldier, this reduction will probably increase the difficulty of obtaining recruits of fit character and intelligence for the medical service. The new law does not provide any promotion for medical officers above the grade of colonel, except the single position of Surgeon-General of the Army. Provision is made for the assignment of five officers of the medical corps for duty with the medical relief department of the Red Cross, and the erection of storehouses by the Red Cross on military reservations or the use of government buildings as such storehouses.

The new law is highly satisfactory in that it establishes a permanent ratio between medical men and enlisted men, provides for an efficient medical reserve, raises the standard of dental and veterinary surgeons, and improves conditions regarding promotion and grade It is unsatisfactory in that it reduces the pay of enlisted men in the medical corps and so increases the difficulty of securing satisfactory nurses and attendants in military hospitals This defect, however, can readily be remedied by later amendment

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[1] Fulk, M. E., and Macleod, J. J. R.: Evidence that the Active Principle of the Retro Peritoneal Chromaphil Tissue Has the Same Physiological Action as the Active Principle of the Suprarenal Glands, Am. Jour. Physiol., 1916, xl, 21.

[2] Vincent, Swale: Internal Secretion and the Ductless Glands, London, 1912.

[3] Gaskell, J. F.: The Chromaffine System of Annelids and the Relation of this System to the Contractile Vascular System in the Leech, Phil. Tr. Roy. Soc. London, 1914, ccv (B), 153.

DIET AND METABOLISM IN CHRONIC INTERSTITIAL NEPHRITIS

It is a significant and fortunate circumstance that increased attention is being directed to the establishment of a rational basis for dietotherapy in many forms of chronic diseases Customs of feeding and textbook admonitions are handed down from decade to decade, often involving systems or details of diet that are as unnecessary or ineffective as they may be irksome to the patient A basis for the critical consideration of this has recently been furnished from the medical clinic of the Johns Hopkins Hospital by Mosenthal and Richards[1] There is much diversity of belief and of practice regarding the amount of protein, and particularly of meat, which may be allowed to the chronic nephritic In cases of the interstitial type, with which alone we are here concerned, it is frequently stated by clinicians of experience that the danger of the retention of waste products in the organism without elimination by the usual renal channel is always a serious one Thus Strauss[2] raises the question whether the familiar polyuria is not to be interpreted as an "antiuremic" response, so that the restriction of fluids advocated by some in the management of the disease presents the added danger of intoxication from uneliminated poisons

As a scientific basis for the supposed perversion of protein metabolism, it has been pointed out that when the food intake and urinary and fecal outputs are carefully measured, a gain of nitrogen to the body is not infrequently discovered Storage of nitrogen is, of course, not a common or long protracted phenomenon in man except during the period of growth or during the convalescence from depleting disease, yet ordinarily one would hesitate to charge a positive nitrogen balance of this sort in a patient only moderately well nourished to any abnormality of metabolism unless the gain were so large as to become unduly conspicuous Students of the metabolism of nephritis have nevertheless interpreted positive nitrogen balances in individuals with interstitial disease as indicative of abnormal retention, that is, they have assumed that the kidneys are insufficient and that consequently the urinary nitrogen cannot keep pace with the quantity ingested Mosenthal and Richards[1] have put patients with chronic interstitial nephritis of moderate severity on "low protein" diet and subsequently on "high protein" diet in order to control some of the factors just discussed With daily nitrogen intakes ranging from 16 gm to as high as 47 gm they observed a positive nitrogen balance, as other investigators likewise have done Shall it be assumed from this, as has heretofore usually happened, that the retained nitrogen circulates in the body as nonprotein nitrogen and manifests itself by a rise in its concentration in the blood? Here the newer methods of blood analysis afford a helpful solution to the question It was calculated that the ingested nitrogen unaccounted for in the excreta would suffice, in the different cases investigated, to raise the nonprotein nitrogen of the blood of these patients to calculated values ranging from 78 to 148 mg per hundred c c of blood, yet the actual values in no instance exceeded 38 mg Mosenthal and Richards remark that even an extremely large error in their theoretical calculations would not invalidate the conclusion that the retained nitrogen was not circulating as waste nitrogen, but had been assimilated or stored by the body tissues

A similar storage may occur in normal individuals on a high calory diet It is therefore misleading to regard these retentions as an index of inability on the part of the kidneys to eliminate nitrogen If it were such, then there must be compensatory action on the part of some cellular tissue or other which prevents the appearance of the excess in the blood as waste nitrogen Mosenthal and Richards cautiously conclude that until these phenomena are elucidated, discretion must be exercised in interpreting a normal figure for nonprotein nitrogen of the blood as indicating that no nitrogen retention has taken place, likewise in considering a positive nitrogen balance as an absolute indication of the inability of the kidney to excrete this substance It is almost needless to add that the ultimate solution of a suitable and theoretically defensible diet in such forms of nephritis must await the answer to the problems of intermediary metabolism which center in the disease Perhaps one can already foresee a possible outcome in the apparent reaction against a too strict enforcement of the no-meat rule in nephritis

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Suprarenal Theory of Pellagra—M P Modinos is convinced that pellagra is the result of defective functioning of the endocrine glands, especially the suprarenals The sympathetic system suffers in consequence, and this might cause all the symptoms of pellagra He practices in Egypt, where pellagra is not very common The three cases of pellagra that have come under his charge apparently sustain his assertions, as two of the patients recovered completely under systematic suprarenal treatment The third patient succumbed to a concomitant liver abscess, and the suprarenals were found double the normal size, hard and purple His report appeared in the *Bulletins Soc Med des Hop de Paris,* April 6, 1916, p 440

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[1] Mosenthal, H O, and Richards, Annabelle E The Interpretation of a Positive Nitrogen Balance in Nephritis, Arch Int Med, February, 1916, p 329

[2] Strauss, H Diätbehandlung innerer Krankheiten, Berlin, 1912, p 136

Current Comment

TRIPLE MERGER OF MEDICAL COLLEGES IN PHILADELPHIA

A noteworthy merger of medical colleges has just taken place in Philadelphia, by which the Medico-Chirurgical College, the Jefferson Medical College and the University of Pennsylvania, School of Medicine, have united to form one larger teaching institution The Medico-Chirurgical College is to be the graduate school of medicine of the University of Pennsylvania, its corporate title to be ' The Medico-Chirurgical College and Hospital, Graduate School in Medicine of the University of Pennsylvania " The Jefferson Medical College and the University of Pennsylvania, School of Medicine, will continue undergraduate medical teaching under a joint title, although retaining their individual identities so far as their properties and endowments are concerned The union of these three institutions, therefore, will provide not only for the better instruction of undergraduates but also for the development on a high plane of instruction for graduates The plan under which the Jefferson Medical College and the University of Pennsylvania, School of Medicine, have been merged is given on another page[1] Since the University of Pennsylvania has recently found it necessary to limit the enrolment of medical students, the union with the Jefferson Medical College is opportune, and will provide the additional teachers, laboratories and clinical material by which larger numbers of medical students can be cared for This merger provides a single management, a single curriculum and single standards for the admission, promotion and graduation of students It also permits a single control, and, therefore, a more systematic and efficient use of the abundance of clinical material formerly controlled by three separate institutions This merger marks a decisive step forward in medical education in this country, and will doubtless point the way to future mergers in other cities

THE QUESTION OF SECRETORY NERVES FOR THE KIDNEY

The secretory activity of the kidney is so closely bound up with its blood supply, which in turn is so susceptible to regulatory impulses transmitted to it through the vagus or the splanchnic nerves, that the problem of the existence of specific secretory nerves for this organ has not been adequately answered The vacillating views have been referred to from time to time in THE JOURNAL[2] The supposedly positive findings were based on the outcome of changes in the water output of the kidneys after experimentation on the vagus and splanchnic innervation One of these nerve groups was believed to carry secretory, the other inhibitory fibers The failure to obtain evidence of any increased cellular metabolism which might be indicated in an increased gaseous exchange in the kidney as the result of nerve stimulation has led in turn to doubts regarding the existence of the secretory fibers believed by Asher to exist A different sort of evidence has been furnished by Quinby[3] of the Johns Hopkins Hospital By means of vascular suture he has removed the dog's kidney from the body and later restored it to its former position Such a kidney is removed from the control of the nervous system, for a time at least Examination of the renal function shows an initial period of overaction, as compared with that of the normal organ This is followed by a balanced action Evidence has now been furnished that a single implanted kidney is able to maintain normal life Though the results throw no direct evidence on any possible secretory function of either the vagus or the splanchnic nerves, they suggest strongly that secretory nerves, if they exist, must play a minor part in renal secretion No lack of their action is indicated in Quinby's experiments When it is recalled that the existence of diuretics derived from special tissues in the body has been postulated of late, it becomes probable, quoting Quinby, that vasomotor conditions of the kidney, added to the chemical and hormone action of substances contained in the circulating blood, will be found entirely adequate to explain all the variations and types of normal renal function

REINFECTION IN SYPHILIS

The question as to the possibility of the occurrence of more than one infection with the *Spirochaeta pallida* has always been a live one Formerly syphilographers generally believed that cases of reinfection in this disease were exceedingly rare, some going so far as to deny their possibility With the general adoption of more prolonged and vigorous treatment, however and particularly with the recent advent of salvarsan, it has seemed probable that these views are subject to modification The protean aspect of syphilitic lesions always renders their recognition on clinical grounds alone open to considerable question For this reason the cases reported by some of the older writers, and particularly those occurring in the presence of obvious tertiary lesions, most likely represent recrudescences rather than true reinfections Lately, however, particularly during the last year or so, many reports have appeared in the literature of apparently well authenticated cases of a second, and a few of even a third and fourth infection Many of these cases have been studied both parasitologically and serologically Those patients who give a history of a previous chancre, or have been examined at the time of their infection and have had a positive Wassermann reaction which has disappeared on treatment, who again evince the clinical manifestations of a primary infection in which the *Spirochaeta pallida* is demonstrated, and who subsequently develop a second positive Wassermann, apparently present cases of true reinfection In the absence of an absolute means of determining when a cure is final and complete, however, there is even in some of these cases a possibility that it concerns a recrudescence of a previous infection rather than a reinfection, the weak point in many of the reports being the very short time between the first and second infections Nevertheless the repeated occurrence of such cases tends to indicate that the present methods of treatment, if accurately carried out, are capable of eradicating syphilitic infection, and from this point of view true syphilitic reinfection may be regarded as encouraging evidence of the efficacy of the treatment

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[1] Medical College Merger in Philadelphia p 1881

[2] Do the Kidneys Have Secretory Nerves? editorial THE JOURNAL A M A. Dec. 6 1913 p 2073 Secretory Nerves for the Kidney Dec. 11 1915 p 2093 To the literature there referred to may be added Jost W Die sympathetische Innervation der Niere Ztschr f Biol 1914 lxiv 441 Jungmann P and Meyer E. Experimentelle Untersuchungen uber die Abhangigkeit der Nierenfunktion von Nervensystem Arch. exper Path u. Pharmakol 1913 lxxiii, 49 Rhode E. and Ellinger P Ueber die Funktion der Nierennerven Zentralbl. f Physiol. 1913 1914 xxvii 12

[3] Quinby W C The Function of the Kidney When Deprived of Its Nerves Jour Exper Med, 1916 xxiii 535

COTTAGE SCHOOLS

The *Weekly Bulletin* of the New York City Department of Health calls attention to an article by Todd[1] urging the replacement of the present style of "tenement" schools by buildings erected on the cottage plan In favor of this plan is the reduction of risk from infectious disease, particularly so far as such risk is due to the mingling of children from different rooms in the halls of the large buildings Todd considers the ground necessary for the cottage school plan one of its chief assets Much is to be said in favor of the idea that school buildings are a poor financial investment and that a simpler and cheaper as well as more hygienic style of construction would be preferable The one story cottage school almost entirely eliminates danger from fire, especially when proper material is used in its construction The elimination of stairs and basement increases sanitary merits and decreases the cost of construction The elimination of elaborate and expensive ventilating systems also cuts down operating cost

FRAUDULENT ADVERTISING IN THE DISTRICT OF COLUMBIA

Congress prohibits fraudulent advertising in the District of Columbia Why not within the entire federal jurisdiction? Congress has passed a bill, which was signed, May 29, by the president, prohibiting "fraudulent" advertising in the District of Columbia By this act it is made unlawful to display or exhibit to the public in any manner whatever, whether by handbill, placard, poster, picture, film or otherwise, or to insert or to cause to be inserted in any newspaper, magazine or other publication printed in the District of Columbia, or to issue, exhibit or in any way distribute or disseminate to the public, or to deliver, exhibit, mail or send to any person, firm, association or corporation any false, untrue or misleading statement, representation or advertisement, with intent to sell, barter or exchange any goods, wares or anything of value The act further prohibits the use of any of the methods of advertising described above with the intent or purpose to deceive, mislead or induce any person, firm or corporation into employing the services of the advertiser The House of Representatives committee report on the [illegible]ll expressly states that it is designed, among other things, to prevent quack doctors and fake dentists from advertising their fraudulent nostrums, impossible methods and alleged results If the president and Congress agree that a law to prevent fraudulent advertising is a good thing for the District of Columbia, will they not agree that a similar law would be equally good for interstate and foreign commerce and for the purification of the United States mails?

Medical News

(Physicians will confer a favor by sending for this department items of news of more or less general interest such as relate to society activities, new hospitals, education, public health, etc.)

ILLINOIS

Personal—Dr Frank A Stubblefield has been transferred from the staff of the Alton State Hospital to that of the State Hospital for the Criminal Insane, Chester He has been succeeded at Alton by Dr Van Pelt

Typhoid Dangers—The state board of health reports that Pana, Christian County, and Tuscola, Douglas County, are menaced by an epidemic of typhoid At Pana there are thirty-eight clearly defined cases of the disease and at Tuscola fifteen cases have been reported Sanitary inspectors are at work endeavoring to ascertain the cause of the epidemic

Chicago

Memorial for Dr Favill—A committee has been organized to establish a memorial to Henry Baird Favill under the auspices of the City Club and Commercial Club Drs Frank Billings and Emilius C Dudley are the medical members of this committee, which hopes to receive subscriptions amounting to $250,000

Surgical Society Election—At the annual meeting of the Chicago Surgical Society, June 2, the following officers were elected president, Dr William M Harsa, vice president, Dr William Fuller, secretary, Dr Kellogg Speed, and treasurer, Dr Frederick G Dyas

Mercy Hospital Wing Completed—The completion of the new $300,000 addition to Mercy Hospital was announced, June 4, and the formal opening of the building will take place June 15 The new building is four stories in height, and is designed especially for the care of sick children The outstanding indebtedness of the institution now amounts to more than $200,000, and the opening of the building will mark the beginning of a campaign to raise funds to wipe out this deficit

MARYLAND

Transfer of Quarantine—An ordinance authorizing the transfer of quarantine from the city of Baltimore to the federal government was introduced in the second branch of the Baltimore city council, May 22, and was referred to the committee on health

Survey at Frederick.—A medical survey of Frederick is being made by officials of the United States Public Health Service, working in cooperation with the Franklin County officials, the secretary of the state board of health and Dr William W Ford, professor of bacteriology in Johns Hopkins University

University of Maryland Alumni and Graduation Banquet.—The first alumni and graduation banquet of the medical and the general alumni association of the University of Maryland was held, May 31, at the Emerson, and was attended by over 500 alumni and graduates The following officers of the general alumni were elected president, E John W Revell, vice president, Dr Albert H Carroll, treasurer, William Stichel, recording secretary, Dr F V Rhodes, corresponding secretary, Edward P Crummer, and advisory council, medical Drs Charles E Sadtler, Arthur M Shipley and James M H Rowland

Personal—Dr Eugene W Heyde, Parkton, has been appointed one of the health officers of Baltimore County to fill the vacancy caused by the death of Dr Joseph S Baldwin,

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[1] Todd School and Society, iii, [illegible]17

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SOCIETIES

A —Association
Acad —Academy
Am —American
Coll —College
Conf —Conference
Cong —Congress
Conv —Convention
Dist —District
Hosp —Hospital
Internat —International
M —Medical or Medicine
Nat —National
Phar —Pharmaceutical
Phys —Physicians
Ry —Railway
S —Society
Surg —Surgical Surgeon or Surgery

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